European system of accounts

ESA 2010

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Foreword

To achieve the objectives set by the Treaty on the Functioning of the European Union, and more specifically on economic and monetary union, we need high-quality statistical instruments which provide the Union institutions, governments, economic and social operators, and analysts with a set of harmonised and reliable statistics on which to base their decisions and policy advice.

The new European System of National and Regional Accounts (ESA 2010) is a major development of the previous version of 1995. Progress has been achieved in the harmonisation of methodology and in the precision and accuracy of the concepts, definitions, classifications and accounting rules which are needed to enable a consistent, reliable and comparable statistical description of the economies of the Member States and the Union itself. ESA 2010 contains new chapters on important subjects such as financial services measurement, pensions and insurance, European accounts and government accounts. There are also new chapters on generic issues such as the rest of the world account, links with business accounts, and satellite accounts, with illustrative examples.

ESA 2010 is the fruit of several years' work. It draws on the experience acquired by the European Statistical System during its work on harmonising gross national income (GNI) and on monitoring the excessive deficit procedure (EDP) statistics. The European Commission is deeply grateful to all those who contributed to the discussions, and in particular to the specialists from the national statistical institutes, the national central banks and the European Central Bank, for the perseverance and expertise with which they helped Eurostat to accomplish this task.

ESA 2010 is broadly consistent with the System of National Accounts of the United Nations (2008 SNA) with regard to definitions, accounting rules and classifications. It nevertheless incorporates certain differences, particularly in its presentation, which is more in line with its specific use within the Union. This specific use, in fact, requires greater accuracy in the definitions and the accounting rules. It is essential that the key aggregates of the national accounts be comparable between Member States, given the dependence of policy within the Union on national accounts statistics.

To ensure that the concepts, methodologies and accounting rules set out in this volume are strictly applied, it has been decided, following a proposal from the Commission, to give it a solid legal basis. ESA 2010 was thus adopted in the form of a regulation of the European Parliament and of the Council dated 21 May 2013. This regulation comprises binding methodological rules to secure comparability of national accounts aggregates, and a compulsory data transmission programme.

This joint effort by members of the European Statistical System will be an essential tool for formulating and implementing the entire range of Union policies, whether economic, agricultural, regional, social, commercial or environmental.

ESA 2010 will be a crucial aid in the training of those running, understanding and analysing the European economy.

It is our aim to provide the statistics compiled at the level of the Union in the form, frequency and reliability that fully meet the requirements of the users.

In this way, Eurostat aims to give all those engaged in building Europe for the future — institutions, businesses and members of the public alike — the means to base their decisions on a genuine understanding of the issues involved.

June 2013

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Director-General, Eurostat
Chief Statistician of the European Union

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List of abbreviations and acronyms

ABO	accrued benefit obligation
ABS	asset-backed security
BPM6	Balance of payments manual, sixth edition
CCP	central counterparty clearing house
CDS	credit default swap
cif	cost, insurance and freight
COFOG	Classification of the Functions of Government
Coicop	Classification of Individual Consumption by Purpose
COPNI	Classification of the Purposes of Non-Profit Institutions Serving Households
COPP	Classification of Outlays of Producers by Purpose
CPA	Classification of Products by Activity
EAA	economic accounts for agriculture
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EC	European Commission
ECB	European Central Bank
EMU	economic and monetary union
ESA	European System of Accounts
ESO	employee stock option
Esspros	European System of Integrated Social Protection Statistics
EU	European Union
Euribor	European interbank offered rate
Eurostat	the statistical office of the European Union
FDI	foreign direct investment
FISIM	financial intermediation services indirectly measured
fob	free on board
FRA	forward rate agreement
FVC	financial vehicle corporation
GAB	general arrangements to borrow
GDP	gross domestic product
GFS	government finance statistics
GNI	gross national income
GVA	gross value added
IAS	international accounting standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
IC	insurance corporations
ICLS	International Conference of Labour Statisticians
ICPF	insurance corporations and pension funds
ICT	information, communications and telecommunications
IFRS	International Financial Reporting Standards
IIP	international investment position
ILO	International Labour Organisation
IMF	International Monetary Fund

IMTS	international merchandise trade statistics
Intrastat	statistical collection system
I-O	input-output
IPO	initial public offering
IPSASB	International Public Sector Accounting Standards Board
ISIC	International Standard Industrial Classification of all Economic Activities
ISIN	international securities identification number
KAU	kind-of-activity unit
KLEMS	capital, labour, energy, materials and services
LIBOR	London interbank offered rate
MFI	monetary financial institution
MMF	money market fund
MSITS	Manual on statistics of international trade in services
n.e.c.	not elsewhere classified
NAB	new arrangements to borrow
NACE	general industrial classification of economic activities within the European Union
NDP	net domestic product
NOS	net operating surplus
NPI	non-profit institution
NPISH	non-profit institution serving households
NUTS	nomenclature of territorial units for statistics
OECD	Organisation for Economic Cooperation and Development
oMFI	other monetary financial institution
OTC	over the counter
PAYE	pay as you earn
PBO	projected benefit obligation
PF	pension funds
PIM	perpetual inventory method
PPP	purchasing power parity
PPP	public–private partnership
PPS	purchasing power standard
PRGF	Poverty Reduction and Growth Facility
R & D	research and development
ROW	rest of the world
SAM	social accounting matrix
SDR	special drawing right
SEEA	System of Environmental-Economic Accounts
SNA	System of National Accounts
SOCX	Social Expenditure Database
SPE	special-purpose entity
SPV	special-purpose vehicle
Strips	Separate Trading of Registered Interest and Principal Securities
UCITS	undertakings for collective investment in transferable securities
UN	United Nations
VAT	value added tax

CHAPTER 1

General features and basic principles

General features

1.01 The European System of Accounts (hereinafter referred to as 'the ESA 2010' or 'the ESA') is an internationally compatible accounting framework for a systematic and detailed description of a total economy (that is, a region, country or group of countries), its components and its relations with other total economies.

1.02 The predecessor of the ESA 2010, the European System of Accounts 1995 (the ESA 95), was published in 1996[1]. The ESA 2010 methodology as set out in this Annex has the same structure as the ESA 95 publication for the first 13 chapters, but then has 11 new chapters elaborating aspects of the system which reflect developments in measuring modern economies, or in the use of the ESA 95 in the European Union (the EU).

1.03 The structure of this manual is as follows. Chapter 1 covers the basic features of the system in terms of concepts, and sets out the principles of the ESA and describes the fundamental statistical units and their groupings. It gives an overview of the sequence of accounts, and a brief description of key aggregates and the role of supply and use tables and the input-output framework. Chapter 2 describes the institutional units used in measuring the economy, and how these units are classified into sectors and other groups to allow analysis. Chapter 3 describes all transactions with regard to products (goods and services), as well as non-produced assets, in the system. Chapter 4 describes all the transactions in the economy which distribute and re-distribute income and wealth in the economy. Chapter 5 describes the financial transactions in the economy. Chapter 6 describes the changes that can occur to the value of assets through non-economic events or price changes. Chapter 7 describes balance sheets, and the asset and liability classification scheme. Chapter 8 sets out the sequence of accounts, and the balancing items associated with each account. Chapter 9 describes supply and use tables, and their role in reconciling the measures of income, output and expenditure in the economy. It also describes the input-output tables that can be derived from the supply and use tables. Chapter 10 describes the conceptual basis for the price and volume measures associated with the nominal values found in the accounts. Chapter 11 describes the population and labour market measures which can be used with measures of the national accounts in economic analysis. Chapter 12 gives a brief description of quarterly national accounts, and how they differ in emphasis from the annual accounts.

1.04 Chapter 13 describes the purposes, concepts and compilation issues in drawing up a set of regional accounts. Chapter 14 covers the measurement of financial services provided by financial intermediaries and funded through net interest receipts, and reflects years of research and development by Member States in order to have a measure which is robust and harmonised across Member States. Chapter 15 on contracts, leases and licences is necessary to describe an area of increasing importance in the national accounts. Chapters 16 and 17 on insurance, social insurance and pensions describe how these arrangements are handled in the national accounts, as questions of redistribution become of increasing interest as populations age. Chapter 18 covers the rest of the world accounts, which are the national accounts equivalent to the accounts of the balance of payments measuring system. Chapter 19 on European Accounts is also new, covering aspects of the national accounts where European institutional and trading arrangements raise issues which require a harmonised approach. Chapter 20 describes the accounts for the government sector — an area of special interest as issues

[1] Council Regulation (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community (OJ L 310, 30.11.1996, p. 1).

of fiscal prudence by Member States continue to be critical in the conduct of economic policy in the EU. Chapter 21 describes the links between business accounts and national accounts, an area of growing interest as multinational corporations become responsible for an increasing share in gross domestic product (GDP) for all countries. Chapter 22 describes the relationship of satellite accounts with the main national accounts. Chapters 23 and 24 are for reference purposes; Chapter 23 sets out the classifications used for sectors, activities and products in the ESA 2010, and Chapter 24 sets out the complete sequence of accounts for every sector.

1.05 The structure of the ESA 2010 is consistent with the worldwide guidelines on national accounting set out in the System of National Accounts 2008 (2008 SNA), apart from certain differences in presentation and the higher degree of precision of some of the ESA 2010 concepts which are used for specific EU purposes. Those guidelines were produced under the joint responsibility of the United Nations (UN), the International Monetary Fund (IMF), the Statistical Office of the European Union (Eurostat), the Organisation for Economic Cooperation and Development (OECD) and the World Bank. The ESA 2010 is focused on the circumstances and data needs in the EU. Like the 2008 SNA, the ESA 2010 is harmonised with the concepts and classifications used in many other social and economic statistics (for example, statistics on employment, statistics on manufacturing and statistics on external trade). The ESA 2010 therefore serves as the central framework of reference for the social and economic statistics of the EU and its Member States.

1.06 The ESA framework consists of two main sets of tables:

(a) the institutional sector accounts;

(b) the input-output framework, and the accounts by industry.

1.07 The sector accounts provide, by institutional sector, a systematic description of the different stages of the economic process: production, generation of income, distribution of income, redistribution of income, use of income and financial and non-financial accumulation. The sector accounts also include balance sheets to describe the stocks of assets, liabilities and net worth at the beginning and the end of the accounting period.

1.08 The input-output framework, through the supply and use tables, sets out in more detail the production process (cost structure, income generated and employment) and the flows of goods and services (output, imports, exports, final consumption, intermediate consumption and capital formation by product group). Two important accounting identities are reflected in this framework: the sum of incomes generated in an industry is equal to the value added produced by that industry; and, for any product or grouping of products, supply is equal to demand.

1.09 The ESA 2010 encompasses concepts of population and employment. Such concepts are relevant for the sector accounts, the accounts by industry and the supply and use framework.

1.10 The ESA 2010 is not restricted to annual national accounting, but applies also to quarterly and shorter or longer period accounts. It also applies to regional accounts.

1.11 The ESA 2010 exists alongside the 2008 SNA because of the uses of national accounts measures in the EU. The Member States are responsible for the collection and presentation of their own national accounts to describe the economic situation of their countries. Member States also compile a set of accounts which are submitted to the Commission (Eurostat) as part of a regulatory data transmission programme, for key social, economic and fiscal policy uses in the Union. Those uses include determination of Member State monetary contributions to the EU budget via the 'fourth resource', aid to regions of the EU through the structural funds programme and surveillance of Member States' economic performance in the framework of the excessive deficit procedure and of the Stability and Growth Pact.

1.12 In order that levies and benefits are distributed according to measures compiled and presented in a strictly consistent manner, the economic statistics used for those purposes shall be compiled according to the same concepts and rules. The ESA 2010 is a regulation setting forth the rules, conventions, definitions and classifications to be applied in producing the national accounts in Member States which are to be part of the data transmission programme as set out in Annex B to this Regulation.

1.13 Given the very large sums of money involved in the contributions and benefits system operated in the EU, it is essential that the measurement system be applied consistently in each Member State. In such circumstances, it is important to adopt a cautious approach to estimates which cannot be observed directly in the market place, avoiding the use of model-based procedures for the estimation of measures in the national accounts.

1.14 The ESA 2010 concepts are in several instances more specific and precise than those of the 2008 SNA in order to ensure as much consistency as possible between Member States measures derived from the national accounts. This over-riding requirement for robust consistent estimates has resulted in the identification of a core set of national accounts in the EU. Where the level of consistency of measurement across Member States is insufficient, the latter estimates are generally included in so-called 'non-core-accounts' covering supplementary tables and satellite accounts.

1.15 An example of where it has been considered necessary to be cautious in the design of the ESA 2010 lies in the field of pension liabilities. The case for measuring these to assist in economic analyses is a strong one, but the critical requirement in the EU to produce accounts which are consistent across time and space has obliged a cautious approach.

Globalisation

1.16 The increasingly global nature of economic activity has increased international trade in all its forms, and increased the challenges to countries of recording their domestic economies in the national accounts. Globalisation is the dynamic and multidimensional process whereby national resources become more internationally mobile, while national economies become increasingly interdependent. The feature of globalisation which potentially causes most measurement problems for national accounts is the increasing share of international transactions undertaken by multinational companies, where the transactions across borders are between parents, subsidiaries and affiliates. However other challenges exist, and a more exhaustive list of data issues is as follows:

(1) transfer pricing between affiliated corporations (valuation of imports and exports);

(2) the increase in toll processing, where goods are traded across international borders with no change in ownership (goods for processing), and merchanting;

(3) international trading via the internet, both for corporations and households;

(4) the trade and use of intellectual property assets across the world;

(5) workers working abroad, and remitting significant amounts to the family in the domestic territory (workers' remittances, as part of personal transfers);

(6) multinational corporations organising their business across national boundaries, to maximise production efficiency and minimise the global tax burden. This can give rise to artificial corporation structures which may not reflect the economic reality;

(7) the use of off-shore financing vehicles (special purpose entities and other forms) to arrange finance for global activities;

(8) re-exports of goods, and in the EU the transport of goods between Member States after entry into the Union (quasi transport);

(9) increase in foreign direct investment relationships, and the need to identify and allocate direct investment flows.

1.17 All of these increasingly common aspects of globalisation make the capture and accurate measurement of cross-border flows a growing challenge for national statisticians. Even with a comprehensive and robust collection and measurement system for the entries in the rest of the world sector (and thus also in the international accounts found in the balance of payments), globalisation will increase the need for extra efforts to maintain the quality of national accounts for all economies and groupings of economies.

Uses of the ESA 2010

Framework for analysis and policy

1.18 The ESA framework can be used to analyse and evaluate:

(a) the structure of a total economy. Examples of types of measurement used are:

(1) value added and employment by industry;

(2) value added and employment by region;

(3) income distributed by sector;

(4) imports and exports by product group;

(5) final consumption expenditure by functional heading and product group;

(6) fixed capital formation and fixed capital stock by industry;

(7) the composition of the stocks and flows of financial assets by type of asset and by sector;

(b) specific parts or aspects of an economy. Examples are:

(1) banking and finance in the national economy;

(2) the role of government and its financial position;

(3) the economy of a specific region (in comparison to that of the nation as a whole);

(4) household saving and debt levels;

(c) the development of an economy over time. Examples are:

(1) the analysis of GDP growth rates;

(2) the analysis of inflation;

(3) the analysis of seasonal patterns in household expenditure on the basis of quarterly accounts;

(4) the analysis of the changing importance of particular types of financial instruments over time, e.g. the increased importance of financial derivatives;

(5) the comparison of the industrial structures of the national economy over the long term;

(d) a total economy in relation to other economies. Examples are:

(1) the comparison of the roles and size of government in the Member States of the EU;

(2) the analysis of the interdependencies between the economies of the EU, *taking into account Member States and their regions;*

(3) the analysis of the composition and destination of the exports of the EU;

(4) the comparison of GDP growth rates or disposable income per capita in the EU and other developed economies.

1.19 For the EU and its Member States, the figures from the ESA framework play a major role in formulating and monitoring their social and economic policies.

The following examples demonstrate uses of the ESA framework:

(a) monitoring and guiding the euro area macroeconomic and monetary policymaking, and defining criteria of convergence for the economic and monetary union (EMU) in terms of national accounts figures (e.g. GDP growth rates);

(b) defining criteria for the excessive deficit procedure: measures of government deficit and debt;

(c) granting financial support to regions in the EU: the allocation of expenditure funds to regions uses regional accounts statistics;

(d) determining the own resources of the EU budget. The latter depend on national accounts figures in three ways:

(1) the total resources for the EU are determined as a percentage of the sum of Member States' gross national incomes (GNI);

(2) the third own resource of the EU is the VAT own resource. The contributions by the Member States for this resource are largely determined by national accounts figures, because these figures are used to calculate the average VAT rate;

(3) the relative sizes of the contributions by the Member States for the fourth own resource of the EU are based on their gross national income estimates. These estimates are the basis for the majority of Member States' payments.

Characteristics of the ESA 2010 concepts

1.20 In order to establish a balance between data needs and data possibilities, the concepts in the ESA 2010 have several important characteristics. The characteristics are that the accounts are:

(a) internationally compatible;

(b) harmonised with other social and economic statistical systems;

(c) consistent;

(d) operational, meaning that they can be measured in practice;

(e) different from most administrative concepts;

(f) well-established and fixed over a long period;

(g) focused on describing the economic process in monetary and readily observable terms;

(h) capable of applying in different situations and for different purposes.

1.21 The concepts in the ESA 2010 are internationally compatible because:

(a) the concepts in the ESA 2010 are consistent with those in the worldwide guidelines on national accounting, i.e. the 2008 SNA;

(b) for the Member States, the ESA 2010 is the standard for submitting national accounts data to all international organisations;

(c) international compatibility of concepts is essential when comparing statistics for different countries.

1.22 The concepts in the ESA 2010 are harmonised with those in other social and economic statistics because the ESA 2010 employs concepts and classifications (e.g. Statistical classification of economic activities in the European Union 'NACE rev. 2'[2]) that are used for other social and economic statistics of Member States, e.g. in statistics on manufacturing, statistics on external trade and statistics on employment; conceptual differences have been kept to a minimum. Furthermore, the concepts and classifications in the ESA 2010 are harmonised with those of the United Nations.

This harmonisation with social and economic statistics helps the linkage to and comparison with these figures, so that the quality of the national accounts figures can be assured. Furthermore, the information contained in these specific statistics can be better related to the general statistics on the national economy.

[2] Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 (OJ L 393, 30.12.2006, p. 1).

1.23 The shared concepts used throughout the national accounting framework and the other social and economic statistical systems enable consistent measures to be derived. For example, the following ratios can be calculated:

(a) productivity figures, such as value added per hour worked (these figures require consistency between the concepts of value added and hours worked);

(b) national disposable income per capita (this ratio requires consistency between the concepts of national disposable income and measures of population);

(c) fixed capital formation as a percentage of fixed capital stock (this ratio requires consistency between the definitions of these flows and stocks);

(d) government deficit and government debt as percentages of gross domestic product (these figures require consistency between the concepts of government deficit, government debt and gross domestic product).

The internal consistency of concepts allows estimates to be derived by residual, e.g. saving can be estimated as the difference between disposable income and final consumption expenditure.

1.24 The concepts in the ESA 2010 are applied with data collection and measurement in mind. The operational character is revealed in several ways in the guidance for drawing up the accounts.

(a) Activities or items are only described when significant in size. For example: own-account production of goods by households such as weaving cloth and the production of pottery shall not be recorded as production, because these are insignificant for EU countries.

(b) Some concepts are accompanied by guidance on how to estimate them. For example, in defining consumption of fixed capital, reference is made to linear depreciation. For estimating fixed capital stock, the Perpetual Inventory Method is to be applied where direct information on the stock of fixed assets is missing. Another example is the valuation of own-account production: in principle, it is valued at basic prices, but if necessary the basic price valuation may be approximated by adding up the various costs involved.

(c) Some conventions have been adopted. For example the collective services provided by government are all classified as final consumption expenditure.

1.25 However, the data needed for national accounts statistics may not be easy to collect directly, as the underlying concepts usually diverge from the concepts underlying administrative data sources. Examples of the administrative sources are business accounts, records for various types of taxes (VAT, personal income tax, import levies, etc.), social security data and data from supervisory boards on banking and insurance. These administrative data serve as inputs for compiling the national accounts. In general, they are transformed in order to comply with the ESA.

The concepts in the ESA usually differ from their administrative counterparts in that:

(a) administrative concepts differ between countries. As a consequence, international compatibility is not possible using administrative concepts;

(b) administrative concepts change over time. As a consequence, comparisons over time are not possible through administrative concepts;

(c) the concepts underlying administrative data sources are usually not consistent among different administrative systems. However, linking and comparing data, which is crucial for compiling national accounts figures, is only possible with a consistent set of concepts;

(d) the administrative concepts are generally not optimal for economic analysis and the evaluation of economic policy.

1.26 Nevertheless, administrative data sources meet the data needs of national accounts and other statistics very well, because:

(a) concepts and classifications originally devised for statistical purposes are also adopted for administrative purposes, e.g. the classification of government expenditure by type;

(b) administrative data sources explicitly take account of the (separate) data needs of statistics; this applies, for example, to the Intrastat system for providing information about deliveries of goods between Member States.

1.27 The main concepts in the ESA are well established and fixed over a long period, because:

(a) they have been approved as the international standard for many years;

(b) in the successive international guidelines on national accounting, very few of the underlying concepts change.

This conceptual continuity reduces the need to recalculate time series. Furthermore, it limits the vulnerability of the concepts to national and international political pressure. For these reasons, the national accounts figures have been able to serve as an objective database for economic policy and analysis.

1.28 The concepts in the ESA 2010 are focused on describing the economic process in monetary and readily observable terms. Stocks and flows that are not readily observable in monetary terms, or that do not have a clear monetary counterpart, are not recorded in the ESA.

This principle has not been applied strictly, because account should also be taken of the requirement of consistency and the needs of users. For example, consistency requires that the value of collective services produced by government is recorded as output, because the payment of compensation of employees and the purchase of all kinds of goods and services by government are readily observable in monetary terms. Furthermore, for the purposes of economic analysis and policy, describing the collective services of government in relation to the rest of the national economy increases the usefulness of the national accounts as a whole.

1.29 The scope of the concepts in the ESA can be illustrated by considering some important borderline issues.

The following shall be recorded within the production boundary of the ESA (see paragraphs 3.07 to 3.09):

(a) production of individual and collective services by government;

(b) own-account production of housing services by owner-occupiers;

(c) production of goods for own final consumption, e.g. of agricultural products;

(d) own-account construction, including that by households;

(e) production of services by paid domestic staff;

(f) breeding of fish in fish farms;

(g) production forbidden by law, as long as all units involved in the transaction enter into it voluntarily;

(h) production from which the revenues are not declared in full to the fiscal authorities, e.g. clandestine production of textiles.

1.30 The following fall outside the production boundary, and shall not be recorded in the ESA:

(a) domestic and personal services produced and consumed within the same household, e.g. cleaning, the preparation of meals or the care of sick or elderly people;

(b) volunteer services that do not lead to the production of goods, e.g. care-taking and cleaning without payment;

(c) natural breeding of fish in open seas.

1.31 The ESA records all outputs that result from production within the production boundary. However, the outputs of ancillary activities shall not be recorded. All inputs consumed by an ancillary activity shall be treated as inputs to the activity it supports. If an establishment undertaking only ancillary activities is statistically observable, in that separate accounts for the production it undertakes are readily available, or if it is in a geographically different location from the establishments it serves, it has to be recorded as a separate unit and allocated to the industrial classification corresponding to its principal activity, in both national and regional accounts. In the absence of suitable basic data being available, the output of the ancillary activity may be estimated by summing costs.

1.32 If activities are regarded as production and their output is recorded, then the concomitant income, employment, final consumption, etc. are also recorded. For example, as the own-account production of housing services by owner-occupiers is recorded as production, so the income and final consumption expenditure it generates for these owner-occupiers are also recorded. As there is, by definition, no labour input to the production of the services of owner-occupied dwellings, no employment is recorded. This maintains consistency with the system of labour statistics, where no employment is recorded for ownership of dwellings. The reverse holds when activities are not recorded as production: domestic services produced and consumed within the same household do not generate income and final consumption expenditure and no employment is involved.

1.33 The ESA also lays down conventions, concerning:

(a) valuation of government output;

(b) valuation of the output of insurance services and financial intermediation services indirectly measured;

(c) recording of the collective services provided by government as final consumption expenditure and not as intermediate consumption;

Classification by sector

1.34 Sector accounts are created by allocating units to sectors and this enables transactions and balancing items of the accounts to be presented by sector. The presentation by sector reveals many key measures for economic and fiscal policy purposes. The main sectors are households, government, corporations (financial and non-financial), non-profit institutions serving households (NPISHs) and the rest of the world.

The distinction between market and non-market activity is an important one. An entity controlled by government, which is shown to be a market corporation, is classified in the corporation sector, outside the general government sector. Thus, the deficit and debt levels of the corporation will not be part of the general government deficit and debt.

1.35 It is important that clear and robust criteria for allocating entities to sectors are set out.

The public sector consists of all institutional units resident in the economy that are controlled by government. The private sector consists of all other resident units.

Table 1.1 sets out the criteria used to distinguish between public and private sector, and in the public sector between the government sector and public corporations sector, and in the private sector between the NPISH sector and the private corporations sector.

Table 1.1

Criteria	Controlled by government (public sector)	Privately controlled (private sector)
Non-market output	General government	NPISH
Market output	Public corporations	Private corporations

1.36 Control is defined as the ability to determine the general policy or programme of an institutional unit. Further details in relation to the definition of control are given in paragraphs 2.35 to 2.39.

1.37 Differentiating between market and non-market, and so, for public sector entities, classifying them into the general government sector or the corporations sector, is decided by the following rule:

An activity shall be considered as a market activity when the corresponding goods and services are traded under the following conditions:

(1) sellers act to maximise their profits in the long term, and do so by selling goods and services freely on the market to whoever is prepared to pay the asking price;

(2) buyers act to maximise their utility given their limited resources, by buying according to which products best meet their needs at the offered price;

(3) effective markets exist where sellers and buyers have access to, and information on, the market. An effective market can operate even if these conditions are not met perfectly.

1.38 The detail in the conceptual framework of the ESA offers the opportunity for flexibility: some concepts are not explicitly present in the ESA but can nevertheless easily be derived from it. An example is the creation of new sectors by rearranging the subsectors defined in the ESA.

1.39 Flexibility exists also through the possibility to introduce additional criteria that do not conflict with the logic of the system. For example, these criteria can allow subsector accounts to be drawn up by the scale of employment for producer units or the size of income for households. For employment, subclassification by level of education, age and gender can be introduced.

Satellite accounts

1.40 For some data needs, separate satellite accounts should be drawn up.

Examples are:

(a) social accounting matrices (SAMs);

(b) the role of tourism in the national economy;

(c) the analysis of the costs and financing of health care;

(d) research and development recognised as capital formation of intellectual property;

(e) recognition of human capital as assets in the national economy;

(f) the analysis of the income and expenditure of households on the basis of micro-oriented concepts of income and expenditure;

(g) the interaction between the environment and the economy;

(h) production within households;

(i) analysis of changes in welfare;

(j) analysis of the differences between national accounts and business accounts figures and their influence on stock and exchange markets;

(k) estimation of tax revenues.

1.41 Satellite accounts serve such data needs by:

(a) showing more detail where necessary and leaving out superfluous detail;

(b) enlarging the scope of the accounting framework by adding non-monetary information, e.g. on pollution and environmental assets;

(c) changing some basic concepts, e.g. by enlarging the concept of capital formation by including expenditure on education.

1.42 A social accounting matrix (SAM) is a matrix presentation that elaborates the linkages between supply and use tables and the sector accounts. A SAM provides additional information on the level and composition of employment, via a subdivision of compensation of employees by type of person employed. This subdivision applies to both the use of labour by industry, as shown in the use tables, and the supply of labour by socio-economic subgroup, as shown in the allocation of primary income account for subsectors of the sector households. In this way, the supply and use of various categories of labour is shown systematically.

1.43 In satellite accounts, all basic concepts and classifications of the central framework of the ESA 2010 shall be retained. Changes in the concepts shall only be introduced when this is the purpose of the satellite account. In such instances, the satellite account shall also contain a table showing the link between the major aggregates in the satellite account and those in the central framework. In this way, the central framework retains its role as a framework of reference and at the same time more specific needs are addressed.

1.44 In general terms, the central framework does not include measures of stocks and flows that are not readily observable in monetary terms (or without a clear monetary counterpart). By their nature, the analysis of such stocks and flows is usually also well served by compiling statistics in non-monetary terms, e.g.:

(a) production within households can be described in terms of hours allocated to the alternative uses;

(b) education can be described in terms of type of education, the number of pupils, the average number of years of education before obtaining a diploma, etc.;

(c) the effects of pollution can be described in terms of changes in the number of living species, the health of the trees in the forest, the volume of refuse, the amounts of carbon-monoxide and radiation, etc.

1.45 Satellite accounts enable such statistics in non-monetary units to be linked to the national accounts in the central framework. Using the classifications employed in the central framework for such non-monetary statistics enables the link to be made, e.g. the classification by type of household or the classification by industry. In this way, a consistent extended framework is drawn up. This framework can then serve as a database for the analysis and evaluation of interactions between the variables in the central framework and those in the extended part.

1.46 The central framework and its major aggregates do not describe changes in welfare. Extended accounts can be drawn up which include also the imputed monetary values of, for example:

(a) domestic and personal services produced and consumed within the same household;

(b) changes in leisure time;

(c) amenities and disadvantages of urban life;

(d) inequalities in the distribution of income over persons.

1.47 The extended accounts can also reclassify the final expenditure on regrettable necessities (e.g. defence) as intermediate consumption, i.e. as not contributing to welfare. Similarly, the damage due to floods and other natural disasters may be classified as intermediate consumption, i.e. as a reduction in (absolute) welfare. In this way, one could try to construct a very rough and very imperfect indicator of changes in welfare. However, welfare has many dimensions, most of which are not best expressed in monetary terms. A better solution for measuring welfare is therefore to use, for each dimension, separate indicators and units of measurement. The indicators could be, for example, infant mortality, life expectancy, adult literacy and national income per capita. These indicators could be incorporated into a satellite account.

1.48 In order to attain a consistent, internationally compatible framework, administrative concepts are not employed in the ESA. However, for all kinds of national purposes, obtaining figures based on administrative concepts can be very useful. For example, for estimating tax revenues, statistics of taxable income are required. Such statistics can be provided by making some modifications to the national accounts statistics.

1.49 A similar approach could be taken for concepts used in national economic policy, e.g. for:

(a) the concept of inflation used for increasing pensions, unemployment benefits or compensation of employees for civil servants;

(b) the concepts of taxes, social contributions, government and the collective sector used in discussing the optimal size of the collective sector;

(c) the concept of 'strategic' sectors/industries used in national economic policy or the economic policy of the EU;

(d) the concept of 'business investments' used in national economic policy;

(e) a table showing a complete recording of pensions.

Satellite accounts or supplementary tables can meet such data needs.

The ESA 2010 and the 2008 SNA

1.50 The ESA 2010 is based on the concepts of the 2008 SNA, which provides guidelines on national accounting for all countries throughout the world. Nevertheless, there are several differences between the ESA 2010 and the 2008 SNA:

(a) Differences in presentation:

(1) In the ESA 2010 there are separate chapters on transactions in products, distributive transactions and financial transactions. In contrast, in the 2008 SNA these transactions are explained in chapters arranged by account, e.g. chapters on the production account, the primary distribution of income account, the capital account and the rest of the world account.

(2) The ESA 2010 describes a concept by providing a definition and a listing of what is included and what is excluded. The 2008 SNA describes concepts usually in more general terms and explains the rationale behind the conventions adopted.

(b) The ESA 2010 concepts are in several instances more specific and precise than those of the 2008 SNA:

(1) The 2008 SNA does not contain specific criteria on the distinction between market, for own final use and non-market categorisation of output. The ESA has therefore introduced more detailed guidance to ensure a uniform approach.

(2) The ESA 2010 assumes that several types of household production of goods, such as the weaving of cloth and the making of furniture, are not significant in Member States and therefore need not be recorded.

(3) The ESA 2010 makes reference to institutional arrangements in the EU, such as the Intrastat system for recording intra-EU flows of goods and the contributions by the Member States to the EU.

(4) The ESA 2010 contains EU-specific classifications, e.g. Classification of products by activity (CPA)[3] for products and NACE Rev. 2 for industries (both are harmonised with the corresponding UN classifications).

(5) The ESA 2010 contains an additional classification for all external transactions: they are divided into those between residents of the EU and those with residents from outside the EU.

(6) The ESA 2010 contains a rearrangement of the 2008 SNA subsectors for the financial corporations sector, to meet the needs of the European Monetary Union. The ESA 2010 can be more specific than the 2008 SNA, because the ESA 2010 primarily applies to the Member States. For the data needs in the Union, the ESA should also be more specific.

The ESA 2010 and the ESA 95

1.51 The ESA 2010 differs in scope as well as in concepts from the ESA 95. Most of the differences correspond to differences between the 1993 SNA and the 2008 SNA. The major differences are:

[3] Regulation (EC) No 451/2008 of the European Parliament and of the Council of 23 April 2008 establishing a new statistical classification of products by activity (CPA) (OJ L 145, 4.6.2008, p. 65).

(a) the recognition of research and development as capital formation leading to assets of intellectual property. This change shall be recorded in a satellite account, and included in the core accounts when sufficient robustness and harmonisation of measures is observable amongst Member States;

(b) expenditures on weapon systems that meet the general definition of assets have been classified as fixed capital formation, rather than intermediate expenditure;

(c) the analytical concept of capital services has been introduced for market production, so that a supplementary table may be produced showing them as a component of value added;

(d) the financial assets boundary has been expanded to include a wider coverage of financial derivative contracts;

(e) new rules for recording pension entitlements. A supplementary table has been introduced into the accounts, to allow estimates to be recorded for all entitlements in social insurance, whether funded or unfunded. The full range of information required for a comprehensive analysis is provided in this table that shows the entitlements and associated flows for all private and public pension schemes, whether funded or unfunded, and including social security pension schemes;

(f) the application of the rules on change of ownership of goods has been made universal, resulting in changes to the recording of merchanting, and goods sent for processing, both abroad and in the domestic economy. This results in goods sent for processing abroad being recorded on a net basis, as opposed to a gross basis in the 1993 SNA and the ESA 95. This change has significant implications for the recording of such activities in the supply and use framework;

(g) more guidance is given on financial corporations in general, and special purpose entities (SPEs) in particular. The treatment of government controlled SPEs abroad has been changed to ensure that liabilities incurred by the SPEs are shown in the government accounts;

(h) the treatment of super dividends paid by public corporations has been clarified, i.e. they are to be treated as exceptional payments and withdrawals from equity;

(i) the principles for the treatment of public-private partnerships have been set out, and the treatment of restructuring agencies expanded;

(j) transactions between government and public corporations, and with securitisation vehicles, have been clarified to improve the recording of items that could significantly affect government debt;

(k) the treatment of loan guarantees has been clarified, and a new treatment introduced for standardised loan guarantees, such as export credit guarantees and student loans guarantees. The new treatment is that, to the extent of the likely call on the guarantees, a financial asset and liability are to be recognised in the accounts.

1.52 The changes in the ESA 2010 in comparison with the ESA 95 are not restricted to conceptual changes. There are major differences in scope, with new chapters on satellite accounts, government accounts and the rest of the world accounts. There are also significant extensions to the chapters on quarterly accounts and regional accounts.

Basic principles of the ESA 2010 as a system

1.53 The main characteristics of the system are:

(a) statistical units and their groupings;

(b) flows and stocks;

(c) the system of accounts and the aggregates;

(d) the input-output framework.

Statistical units and their groupings

1.54 The ESA 2010 system uses two types of unit and two corresponding ways of subdividing the economy, which are quite different and serve separate analytical purposes.

1.55 The first purpose of describing income, expenditure and financial flows, and balance sheets, is met by grouping institutional units into sectors on the basis of their principal functions, behaviour and objectives.

1.56 The second purpose of describing processes of production and for input-output analysis is met by the system grouping local kind-of-activity units (local KAUs) into industries on the basis of their type of activity. An activity is characterised by an input of products, a production process and an output of products.

Institutional units and sectors

1.57 Institutional units are economic entities that are capable of owning goods and assets, of incurring liabilities and of engaging in economic activities and transactions with other units in their own right. For the purposes of the ESA 2010 system, the institutional units are grouped together into five mutually exclusive domestic institutional sectors:

(a) non-financial corporations;

(b) financial corporations;

(c) general government;

(d) households;

(e) non-profit institutions serving households.

The five sectors together make up the total domestic economy. Each sector is also divided into subsectors. The ESA 2010 system enables a complete set of flow accounts and balance sheets to be compiled for each sector, and subsector, as well as for the total economy. Non-resident units can interact with these five domestic sectors, and the interactions are shown between the five domestic sectors and a sixth institutional sector: the rest of the world sector.

Local KAUs and industries

1.58 When institutional units carry out more than one activity, they shall be partitioned with regard to the type of activity. Local KAUs enable this presentation to be made.

A local KAU groups all the parts of an institutional unit in its capacity as producer which are located in a single site or in closely located sites, and which contribute to the performance of an activity at the class level (four digits) of the NACE Rev. 2.

1.59 Local KAUs are registered for each secondary activity; however, if the accounting documents necessary to separately describe such activities are not available, a local KAU will combine several secondary activities. The group of all local KAUs engaged on the same, or similar, kind-of-activity constitutes an industry.

An institutional unit comprises one or more local KAUs; a local KAU belongs to one and only one institutional unit.

1.60 For analysis of the production process, use is made of an analytical unit of production. This unit is only observable when a local KAU produces one type of product, with no secondary activities. This unit is known as a unit of homogeneous production. Groupings of such units constitute homogeneous branches.

Resident and non-resident units; total economy and rest of the world

1.61 The total economy is defined in terms of resident units. A unit is a resident unit of a country when it has a centre of predominant economic interest on the economic territory of that country — that is, when it engages for an extended period (one year or more) in economic activities on this territory. The institutional sectors referred to in paragraph 1.57 are groups of resident institutional units.

1.62 Resident units engage in transactions with non-resident units (that is, units which are resident in other economies). These transactions are the external transactions of the economy and are grouped in the rest of the world account. So the rest of the world plays a role similar to that of an institutional sector, although non-resident units are included only in so far as they are engaged in transactions with resident institutional units.

1.63 Notional resident units, treated in the ESA 2010 system as institutional units, are defined as:

(a) those parts of non-resident units which have a centre of predominant economic interest (usually which engage in economic transactions for a year or more) on the economic territory of the country;

(b) non-resident units in their capacity as owners of land or buildings on the economic territory of the country, but only in respect of transactions affecting such land or buildings.

Flows and stocks

1.64 Two basic kinds of information are recorded: flows and stocks.

Flows refer to actions and effects of events that take place within a given period of time, while stocks refer to positions at a point of time.

Flows

1.65 Flows reflect the creation, transformation, exchange, transfer or extinction of economic value. They involve changes in the value of an institutional unit's assets or liabilities. Economic flows are of two kinds: transactions, and other changes in assets.

Transactions appear in all accounts and tables where flows appear, except the other changes in volume of assets account and the revaluation account. Other changes in assets are recorded only in those two accounts.

Elementary transactions and other flows are grouped into a relatively small number of types according to their nature.

Transactions

1.66 A transaction is an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that it is useful to treat as a transaction, because the unit is operating in two different capacities. Transactions are split into four main groups:

(a) transactions in products: which describe the origin (domestic output or imports) and use (intermediate consumption, final consumption, capital formation — covering consumption of fixed capital — or exports) of products;

(b) distributive transactions: which describe how value added generated by production is distributed to labour, capital and government, and the redistribution of income and wealth (taxes on income and wealth and other transfers);

(c) financial transactions: which describe the net acquisition of financial assets or the net incurrence of liabilities for each type of financial instrument. Such transactions occur both as counterparts of non-financial transactions, and as transactions involving only financial instruments;

(d) transactions not included in the three groups above: acquisitions less disposals of non-produced non-financial assets.

Properties of transactions

Interactions versus intra-unit transactions

1.67 Most transactions are interactions between two or more institutional units. However, the ESA 2010 system records some actions within institutional units as transactions. The purpose of recording these intra-unit transactions is to give a more analytically useful picture of output, final uses and costs.

1.68 Consumption of fixed capital, which is recorded as a cost by the ESA 2010 system, is an intra-unit transaction. Most of the other intra-unit transactions are transactions in products, typically recorded when institutional units operating as both producers and final consumers, choose to consume some of the output they have produced. This is often the case for households and general government.

1.69 All own-produced output used for final uses within the same institutional unit shall be recorded. Own-produced output used for intermediate consumption within the same institutional unit shall be recorded only when production and intermediate consumption take place in different local KAUs within the same institutional unit. Output produced and used as intermediate consumption within the same local KAU shall not be recorded.

Monetary versus non-monetary transactions

1.70 Transactions are monetary transactions when the units involved make or receive payments, or incur liabilities or receive assets denominated in units of currency.

Transactions that do not involve the exchange of cash, or assets or liabilities denominated in units of currency, are non-monetary transactions. Intra-unit transactions are non-monetary transactions. Non-monetary transactions involving more than one institutional unit occur among transactions in products (barter of products), distributive transactions (remuneration in kind, transfers in kind, etc.) and other transactions (barter of non-produced non-financial assets). The ESA 2010 system records all transactions in monetary terms. The values to be recorded for non-monetary transactions must therefore be measured indirectly or otherwise estimated.

Transactions with and without counterparts

1.71 Transactions involving more than one unit are of two kinds. They can be 'something for something', i.e. requited transactions, or they can be 'something for nothing', i.e. unrequited transactions. Requited transactions are exchanges between institutional units, i.e. provision of goods, services or assets in return for a counterpart, e.g. money. Unrequited transactions are payments in cash or in kind from one institutional unit to another without counterpart. Requited transactions occur in all four transaction groups, while unrequited transactions are mainly distributive transactions, for example, taxes, social assistance benefits or gifts. Such unrequited transactions are called transfers.

Rearranged transactions

1.72 The transactions are recorded in the same way as they appear to the institutional units involved. However, some transactions are rearranged in order to bring out the underlying economic relationships more clearly. Transactions can be rearranged in three ways: rerouting, partitioning and recognising the principal party to a transaction.

Rerouting

1.73 A transaction that appears to the units involved as taking place directly between units A and C may be recorded in the accounts as taking place indirectly through a third unit B. Thus, the single transaction between A and C is recorded as two transactions: one between A and B, and one between B and C. In this case the transaction is rerouted.

1.74 An example of rerouting is the way in which employers' social contributions paid directly by employers to social insurance funds are recorded in the accounts. The system records these payments as two transactions: employers pay employers' social contributions to their employees, and employees pay the same contributions to social insurance funds. As with all rerouting, the purpose is to bring out the economic substance behind the transaction, which in this case is to show employers' social contributions as contributions paid for the benefit of employees.

1.75 Another type of rerouting is that of transactions recorded as taking place between two or more institutional units, even though, according to the parties involved, no transaction takes place at all. An example is the treatment of property income earned on certain insurance funds, which is retained by insurance enterprises. The system records this property income as being paid by insurance enterprises to policyholders, who then pay the same amount back to the insurance enterprises as premium supplements.

Partitioning

1.76 When a transaction appearing to the parties involved as a single transaction is recorded as two or more differently classified transactions, the transaction is partitioned. Partitioning does not imply including additional units in the transactions.

1.77 The payment of non-life insurance premiums is a typical partitioned transaction. Although policyholders and insurers regard these payments as one transaction, the ESA 2010 system divides them into two quite different transactions: payments in return for non-life insurance services provided, and net non-life insurance premiums. Recording the sale of a product as the sale of the product and the sale of a trade margin is another example of partitioning.

Recognising the principal party to a transaction

1.78 When a unit carries out a transaction on behalf of another unit (the principal) and is funded by that unit, the transaction is recorded exclusively in the accounts of the principal. As a rule, one should not go beyond this principle by trying, for instance, to allocate taxes or subsidies to ultimate payers or ultimate beneficiaries under the adoption of assumptions.

An example is the collection of taxes by one government unit on behalf of another. A tax is attributed to the government unit that exercises the authority to impose the tax (either as a principal or through the delegated authority of the principal) and has final discretion to set and vary the rate of the tax.

Borderline cases

1.79 The definition of a transaction implies that an interaction between institutional units be by mutual agreement. When a transaction is undertaken by mutual agreement, the prior knowledge and consent of the institutional units is implied. The payments of taxes, fines and penalties are by mutual agreement, in that the payer is a citizen subject to the law of the land. However, uncompensated seizure of assets is not regarded as a transaction, even when imposed by law.

Illegal economic actions shall be considered as transactions when all units involved enter the actions by mutual agreement. Thus, purchases, sales or barters of illegal drugs or stolen property are transactions, while theft is not.

Other changes in assets

1.80 Other changes in assets record changes that are not the result of transactions. They are either:

(a) other changes in the volume of assets and liabilities; or

(b) holding gains and losses.

Other changes in the volume of assets and liabilities

1.81 Other changes in the volume of assets and liabilities records changes divided into three main categories:

(a) normal appearance and disappearance of assets other than by transactions;

(b) changes in assets and liabilities due to exceptional, unanticipated events which are not economic in nature;

(c) changes in classification and structure.

1.82 Examples of changes within the category referred to in point (a) of paragraph 1.81 are discovery or depletion of subsoil assets, and natural growth of non-cultivated biological resources. Examples of changes within the category referred to in point (b) of paragraph 1.81 are losses in assets due to natural disasters, war or severe acts of crime. Unilateral cancellation of debt and uncompensated seizure of assets also belong to category (b). An example of a change within the category referred to in point (c) of paragraph 1.81 is the reclassification of an institutional unit from one sector to another.

Holding gains and losses

1.83 Holding gains and losses occur when there are changes in the prices of assets. They occur on all kinds of financial and non-financial assets, and on liabilities. Holding gains and losses accrue to the owners of assets and liabilities purely as a result of holding the assets or liabilities over time, without transforming them in any way.

1.84 Holding gains and losses measured on the basis of current market prices are called nominal holding gains and losses. These may be decomposed into neutral holding gains and losses, reflecting changes in the general price level, and real holding gains and losses, reflecting changes in the prices of assets beyond that of the general price change.

Stocks

1.85 Stocks are the holdings of assets and liabilities at a point in time. Stocks are recorded at the beginning and end of each accounting period. The accounts that show stocks are called balance sheets.

1.86 Stocks are also recorded for population and employment. However, such stocks are recorded as mean values over the accounting period. Stocks are recorded for all assets within the system's boundaries; that is, for financial assets and liabilities and for non-financial assets, both produced and non-produced. However, the coverage is limited to those assets that are used in economic activity and that are subject to ownership rights.

1.87 Thus, stocks are not recorded for assets such as human capital and natural resources that are not owned.

Within its boundaries, the ESA 2010 system is exhaustive in respect of both flows and stocks. This implies that all changes in stocks can be fully explained by recorded flows.

The system of accounts and the aggregates

Rules of accounting

1.88 An account records changes in value accruing to a unit or sector according to the nature of the economic flows shown in the account. It is a table with two columns. The current accounts are those which show production, generation and allocation of income, distribution and redistribution of income, and its use. The accumulation accounts are the capital and financial accounts, and the other changes in volume accounts.

Terminology for the two sides of the accounts

1.89 The ESA 2010 system shows 'resources' on the right side of the current accounts where transactions appear which add to the economic value of a unit or a sector. The left side of the accounts shows 'uses' — transactions that reduce the economic value. The right side of the accumulation accounts show 'changes in liabilities and net worth' and the left side shows 'changes in assets'. Balance sheets are presented with 'liabilities and net worth' (the difference between assets and liabilities) on the right side and 'assets' on the left. Comparison of two successive balance sheets shows changes in liabilities and net worth and changes in assets.

1.90 A distinction is made in the ESA between legal ownership and economic ownership. The criterion for recording the transfer of goods from one unit to another is that the economic ownership passes from one to the other. The legal owner is the unit entitled in law to the benefits of possession. However, a legal owner can contract with another unit for the latter to accept the risks and rewards of using the goods in production, in return for an agreed payment. The nature of the agreement is a financial lease, where the payments reflect only the placing of the asset at the disposal of the borrower by the provider. For example, when a bank legally owns a plane, but enters into a financial lease arrangement with an airline to operate the plane, then the airline is held to be the owner of the plane as far as transactions in the accounts are concerned. At the same time as the airline is shown as purchasing the plane, a loan is imputed from the bank to the airline reflecting the amounts due in the future for use of the plane.

Double entry/quadruple entry

1.91 For a unit or sector, national accounting is based on the principle of double entry. Each transaction shall be recorded twice, once as a resource (or a change in liabilities) and once as a use (or a change in assets). The total of transactions recorded as resources or changes in liabilities and the total of transactions recorded as uses or changes in assets must be equal, thus permitting a check on the consistency of the accounts.

1.92 National accounts — with all units and all sectors — shall be based on a principle of quadruple entry, since most transactions involve two institutional units. Each transaction shall be recorded twice by the two transactors involved. For example, a social benefit in cash paid by a government unit to a household is recorded in the accounts of government as a use under transfers and a negative acquisition of assets under currency and deposits; in the accounts of the households sector it is recorded as a resource under transfers and an acquisition of assets under currency and deposits.

1.93 Transactions within a single unit (such as the consumption of output by the same unit that produced it) shall require only two entries, whose values have to be estimated.

Valuation

1.94 With the exception of some variables concerning population and labour, the ESA 2010 system shows all flows and stocks in monetary terms. Flows and stocks shall be measured according to their exchange value, i.e. the value at which flows and stocks are in fact, or could be, exchanged for cash. Market prices are, thus, the ESA's reference for valuation.

1.95 In the case of monetary transactions and cash holdings and liabilities, the values required are directly available. In most other cases, the best method of valuation is by reference to market prices for analogous goods, services or assets. This method is used for e.g. barter and the services of owner-occupied dwellings. When no market prices for analogous products are available, for instance in the case of non-market services produced by government, valuation is made by summing production costs. If there is no market price to refer to, and costs are not available, then flows and stocks may be valued at the discounted present value of expected future returns. This last method is only to be used as a last resort.

1.96 Stocks are valued at current prices at the time to which the balance sheet relates, not at the time of production or acquisition of the goods or assets that form the stocks. It is necessary to value stocks at their estimated written-down current acquisition values or production costs.

Special valuations concerning products

1.97 As a result of transport costs, trade margins and taxes less subsidies on products, the producer and the user of a given product usually perceive its value differently. In order to keep as close as possible to the views of the transactors, the ESA 2010 system records all uses at purchaser's prices, which include transport costs, trade margins and taxes less subsidies on products, while output is recorded at basic prices, which exclude those elements.

1.98 Imports and exports of products shall be recorded at border values. Total imports and exports are valued at the exporter's customs frontier, or free on board (FOB). Foreign transport and insurance services between the importer's and the exporter's frontiers are not included in the value of goods but are recorded under services. As it may not be possible to obtain FOB values for detailed product breakdowns, the tables containing details on foreign trade show imports valued at the importer's customs frontier (CIF value). All transport and insurance services to the importer's frontier are included in the value of imported goods. As far as these services concern domestic services, a global FOB/CIF adjustment is made in this presentation.

Valuation at constant prices

1.99 Valuation at constant prices means valuing the flows and stocks in an accounting period at the prices of a previous period. The purpose of valuation at constant prices is to decompose changes over time in the values of flows and stocks into changes in price and changes in volume. Flows and stocks at constant prices are described as being in volume terms.

1.100 Many flows and stocks, e.g. income, do not have price and quantity dimensions of their own. However, the purchasing power of such variables can be obtained by deflating the current values with a suitable price index, e.g. the price index for final national uses, excluding changes in inventories. Deflated flows and stocks are also described as being in real terms. An example is real disposable income.

Time of recording

1.101 Flows shall be recorded on an accrual basis; that is, when economic value is created, transformed or extinguished, or when claims and obligations arise, are transformed or are cancelled.

1.102 Output is recorded when produced and not when paid for by a purchaser. The sale of an asset is recorded when the asset changes hands, not when the corresponding payment is made. Interest is recorded in the accounting period when it accrues, regardless of whether or not it is paid in that period. Recording on an accrual basis applies to all flows, monetary as well as non-monetary and intra-unit as well as flows between units.

1.103 It may be necessary to relax this approach for taxes and other flows concerning general government, which are often recorded on a cash basis in government accounts. It may be difficult to carry out an exact transformation of such flows from cash basis to accrual basis, and so an approximate method may be used.

1.104 As an exception to the general rules governing the recording of taxes and social contributions payable to the general government, they can either be recorded net of the part unlikely to be collected or, if this part is included, it is neutralised in the same accounting period by a capital transfer from the general government to the relevant sectors.

1.105 Flows shall be recorded at the same point of time for all institutional units involved and in all accounts. Institutional units do not always apply the same accounting rules. Even when they do, differences in actual recording may occur for practical reasons such as delays in communication. Consequently, transactions may be recorded at different times by the transactors involved. Such discrepancies shall be eliminated by adjustments.

Consolidation and netting

Consolidation

1.106 Consolidation refers to the elimination, from both uses and resources, of transactions that occur between units when units are grouped, and to the elimination of reciprocal financial assets and liabilities. This occurs commonly when the accounts of subsectors of general government are combined.

1.107 As a matter of principle, flows and stocks between constituent units within subsectors or sectors must not be consolidated.

1.108 However, consolidated accounts may be built up for complementary presentations and analyses. Information on the transactions of such (sub) sectors with other sectors and the corresponding 'external' financial position may be more significant than overall gross figures.

1.109 Moreover, the accounts and tables showing the creditor/debtor relationship provide a detailed picture of financing of the economy and are considered very useful for understanding the channels through which the financing surpluses move from final lenders to final borrowers.

Netting

1.110 Individual units or sectors may have the same kind of transaction both as a use and as a resource (e.g. they both pay and receive interest) and the same kind of financial instrument both as an asset and as a liability. The approach in the ESA is gross recording, apart from the degree of netting which is inherent in the classifications themselves.

1.111 Netting is implicit in various transaction categories, the most outstanding example being 'changes in inventories', which underlines the analytically significant aspect of overall capital formation rather than tracking daily additions and withdrawals. Similarly, with few exceptions, the financial account and other changes in assets accounts record increases in assets and in liabilities on a net basis, bringing out the final consequences of those types of flows at the end of the accounting period.

Accounts, balancing items and aggregates

1.112 For units or groups of units, different accounts record transactions which are connected to an aspect of economic life (for instance, production). For the production account, the transactions will not show a balance between uses and resources without the introduction of a balancing item. Similarly, a balancing item (net worth) must be introduced between the total of assets and the total of liabilities of an institutional unit or sector. Balancing items are meaningful measures of economic performance in themselves. When summed for the whole economy, they are significant aggregates.

The sequence of accounts

1.113 The ESA 2010 system is built around a sequence of interconnected accounts. The full sequence of accounts for the institutional units and sectors is composed of current accounts, accumulation accounts and balance sheets.

1.114 Current accounts deal with the production, generation, distribution and redistribution of income and the use of such income in the form of final consumption. Accumulation accounts cover changes in assets and liabilities and changes in net worth (the difference for any institutional unit or group of units between its assets and liabilities). Balance sheets present stocks of assets and liabilities and net worth.

1.115 The sequence of accounts for local KAUs and industries is shortened to the first current accounts: production account and generation of income account, the balancing item of which is the operating surplus.

The goods and services account

1.116 The goods and services account shows, for the economy as a whole or for groups of products, the total resources (output and imports) and uses of goods and services (intermediate consumption, final consumption, changes in inventories, gross fixed capital formation, acquisitions less disposals of valuables, and exports). This account is not an account in the same sense as the others in the sequence, and does not generate a balancing item which is passed on to the next account in the sequence. It is rather the presentation in table form of an accounting identity, according to which supply is equal to demand for all products and groups of products in the economy.

The rest of the world account

1.117 The rest of the world account covers transactions between resident and non-resident institutional units and the related stocks of assets and liabilities.

As the rest of the world plays a role in the accounting structure similar to that of an institutional sector, the rest of the world account is established from the point of view of the rest of the world. A resource for the rest of the world is a use for the total economy and vice versa. If a balancing item is positive, it means a surplus of the rest of the world and a deficit of the total economy, and vice versa if the balancing item is negative.

The rest of the world account is unlike the other sector accounts in that it does not show all the accounting transactions in the rest of the world, but only those which have a counterparty in the domestic economy being measured.

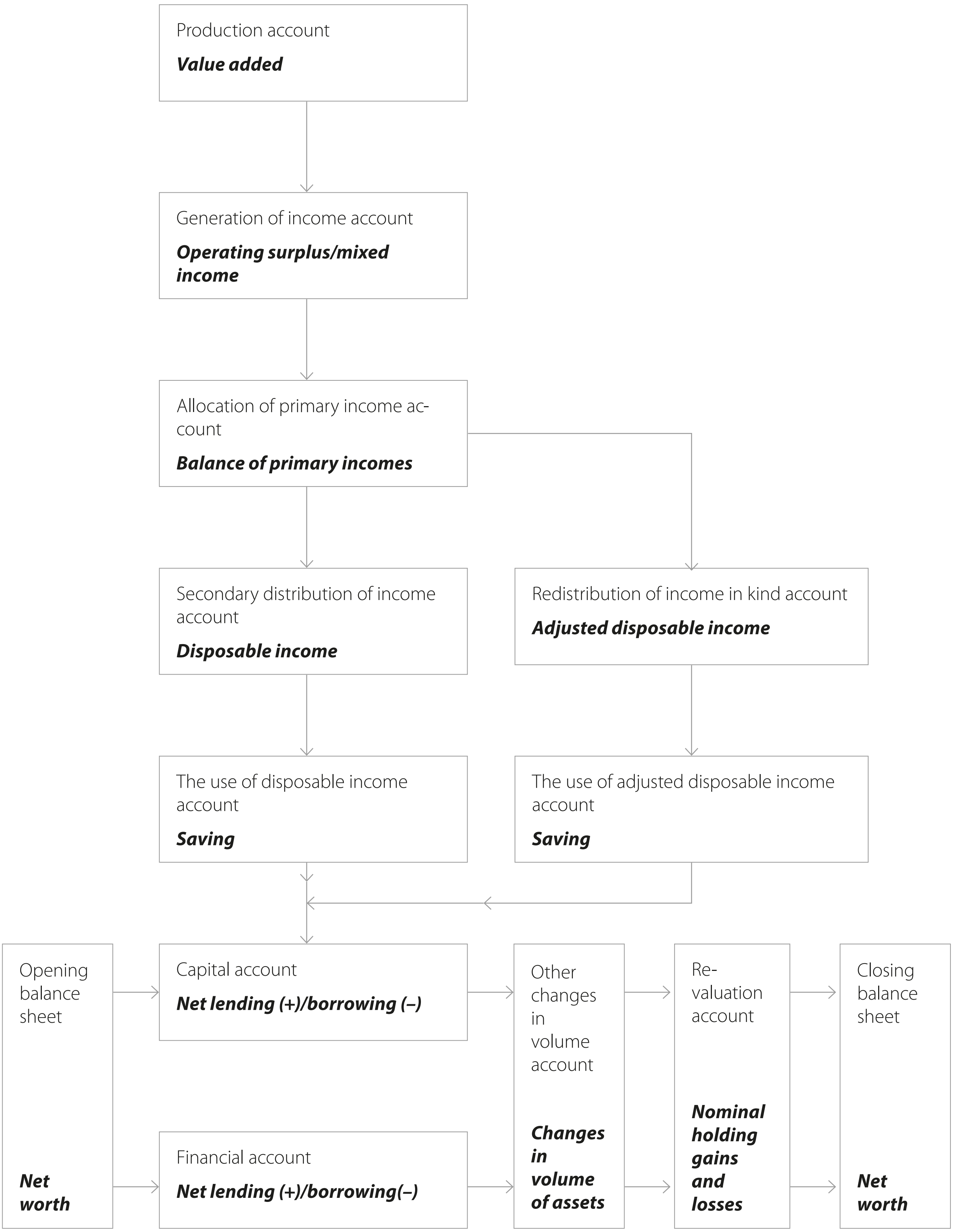
Balancing items

1.118 A balancing item is obtained by subtracting the total value of the entries on one side of an account from the total value on the other side.

Balancing items embody a great deal of information and include some of the most important entries in the accounts, as can be seen from the following examples of balancing items: value added, operating surplus, disposable income, saving, net lending/net borrowing.

The following diagram shows the sequence of accounts in flow form — each balancing item is shown in bold.

A diagram of the sequence of accounts



1.119 The first account in the sequence is the production account, which records the output and inputs of the production process, leaving value added as the balancing item.

1.120 The value added is taken forward to the next account which is the generation of income account. Here the compensation of employees in the production process is recorded, as well as taxes due to government because of the production, so that the operating surplus (or mixed income from the self-employed of the households sector) can be derived as the balancing item for each sector. This step is necessary so that the amount of value added retained in the producing sector as operating surplus or mixed income can be measured.

1.121 Then the value added, broken down between compensation of employees, taxes and operating surplus/mixed income, is taken forward with this breakdown to the allocation of primary income account. The breakdown allows the allocation of each factor income to the receiving sector, as opposed to the producing sector. For example, all compensation of employees is allocated between the households sector and the rest of the world sector, whereas operating surplus remains in the corporations sector where it was generated. Also recorded in this account are the property income flows into the sector, and those out of the sector, so that the balancing item is the balance of primary incomes flowing into the sector.

1.122 The next account records redistribution of these incomes through transfers — the secondary distribution of income account. The major instruments of redistribution are government taxes on, and social benefits for, the households sector. The balancing item is disposable income.

1.123 The main sequence of core accounts carries on to the use of disposable income account; an account relevant to the households sector, as it is here that household final expenditure is recorded, leaving household saving as the balancing item.

1.124 At the same time a parallel account is created, the redistribution of income in kind account. This account has the specific purpose of showing social transfers in kind as an imputed transfer from government to the households sector, so that household income can rise by the value of individual government services. In the next account (use of adjusted disposable income account), the household use of disposable income is increased by the same amount, as if the households sector were buying the individual services provided by government. Those two imputations cancel out, so that the balancing item is saving, identical to saving in the main sequence of accounts.

1.125 Saving is taken on to the capital account where it is used to fund capital formation, allowing for capital transfers in and out of the sectors. Underspend or overspend on the acquisition of real assets results in the balancing item net lending or borrowing. Net lending is a surplus loaned out, and net borrowing is the financing of a deficit.

1.126 Finally, the financial accounts are met, where the detailed lending and borrowing of each sector is laid out so that a balancing item of net lending or borrowing is observed. This should exactly match the net lending/borrowing balancing item of the capital account, and any difference must be a measurement discrepancy between the real and financial recordings of economic activity.

1.127 Considering the bottom row of the diagram, the left-hand account is the opening balance sheet, showing the level of all assets and liabilities, both real and financial, at the start of a specified period. The wealth of an economy is measured by its net worth (assets less liabilities) and this is shown at the bottom of the balance sheet.

1.128 Moving from left to right from the opening balances, the various changes to assets and liabilities that occur in the period of account are recorded. The capital account and financial account show the changes due to transactions in real assets and financial assets and liabilities respectively. In the absence of other effects, this would enable the immediate calculation of the closing position, by adding the changes to the opening position.

1.129 However, changes can occur outside the economic cycle of production and consumption, and such changes will affect the values of assets and liabilities at the closing period. One type of change is a change in volume of assets — real changes to fixed capital brought about by events which are not part of the economy. An example would be a catastrophic loss — a large earthquake, when a significant amount of assets were destroyed not through an economic transaction of exchange or transfer. This loss must be recorded in the other changes in volume account, to account for the lower level of assets than expected purely by looking at economic events. A second way in which assets (and liabilities) can change in value, other than as the result of an economic transaction, is through a change in price resulting in holding gains and losses in the stock of assets held. This change is recorded in the revaluation accounts. Allowing for these two extra effects on the values of the stock of assets and liabilities enables the closing balance sheet values to be estimated as the opening position adjusted for the changes in the flow accounts of the bottom row of the figure.

Aggregates

1.130 The aggregates are composite values which measure the result of the activity of the total economy; for example, output, value added, disposable income, final consumption, saving, capital formation, etc. Although the calculation of the aggregates is not the sole purpose of the ESA, they are important as summary indicators for purposes of macro-economic analysis and comparisons over time and space.

1.131 Two types of aggregates are distinguished:

(a) aggregates which refer directly to transactions in the ESA 2010 system, such as the output of goods and services, final consumption, gross fixed capital formation, compensation of employees, etc.;

(b) aggregates which represent balancing items in the accounts, such as GDP at market prices, operating surplus of the total economy, GNI, national disposable income, saving, current external balance, and net worth of the total economy (national wealth).

1.132 There are important uses for national accounts measures per head of population. For broad aggregates such as GDP or national income or household final consumption, the denominator commonly used is the total (resident) population. When subsectoring the accounts or part of the accounts of the households sector, data on the number of households and the number of persons belonging to each subsector are used.

GDP: a key aggregate

1.133 GDP is one of the key aggregates in the ESA. GDP is a measure of the total economic activity taking place on an economic territory which leads to output meeting the final demands of the economy. There are three ways of measuring GDP at market prices:

(1) the production approach, as the sum of the values added by all activities which produce goods and services, plus taxes less subsidies on products;

(2) the expenditure approach, as the total of all final expenditures made in either consuming the final output of the economy, or in adding to wealth, plus exports less imports of goods and services;

(3) the income approach, as the total of all incomes earned in the process of producing goods and services plus taxes on production and imports less subsidies.

1.134 These three approaches to measuring GDP also reflect the different ways in which GDP can be considered in terms of components. Value added can be broken down by institutional sector, and by the type of activity or industry which is contributing to the total, e.g. agriculture, manufacturing, construction, services, etc.

Final expenditures can be broken down by type: household expenditure, NPISH final expenditure, government final expenditure, change in inventories, fixed capital formation and exports, less the cost of imports.

Total incomes earned can be broken down by type of income — compensation of employment, and operating surplus.

1.135 In order to achieve the best estimate of GDP, it is good practice to feed the elements of these three approaches into a supply and use framework. This enables value added and income estimates by industry to be reconciled, and supply and demand for products to be balanced. This integrated approach ensures consistency between the components of GDP, and a better estimate of the level of GDP than from only one of the three approaches. By deducting consumption of fixed capital from GDP, net domestic product at market prices (NDP) is obtained.

The input-output framework

1.136 The input-output (I-O) framework brings together components of Gross Value Added (GVA), industry inputs and outputs, product supply and demand, and the composition of uses and resources across institutional sectors for the economy. This framework breaks the economy down to display transactions of all goods and services between industries and final consumers for a single period (for example, a quarter or a year). Information may be presented in two ways:

(a) supply and use tables;

(b) symmetric input-output tables.

Supply and use tables

1.137 Supply and use tables show the whole economy by industry (e.g. motor vehicles industry) and products (e.g. sports goods). The tables show links between components of GVA, industry inputs and outputs, and product supply and demand. Supply and use tables link different institutional sectors of the economy (e.g. public corporations) together with detail of imports and exports of goods and services, government expenditure, household and NPISHs expenditure and capital formation.

1.138 Producing supply and use tables allows an examination of consistency and coherence of national accounts components within a single detailed framework and, by incorporating the components of the three approaches to measuring GDP (i.e. production, income and expenditure), enables a single estimate of GDP to be determined.

1.139 When balanced in an integrated manner, supply and use tables also provide coherence and consistency in linking the components of the following three accounts:

(1) goods and services account;

(2) production account (by industry and by institutional sector); and

(3) generation of income account (by industry and by institutional sector).

Symmetric input-output tables

1.140 Symmetric input-output tables are derived from the data in supply and use tables and other additional sources to form the theoretical basis for subsequent analyses.

1.141 These tables contain symmetric (product by product or industry by industry) tables, the Leontief Inverse and other diagnostic analyses such as output multipliers. These tables show separately the consumption of domestically produced and imported goods and services, providing a theoretical framework for further structural analysis of the economy, including the composition as well as the effect of changes in final demand on the economy.

CHAPTER 2

Units and groupings of units

2.01 The economy of a country is a system whereby institutions and people interact through exchanges and transfers of goods, services and means of payment (e.g. money) for the production and consumption of goods and services.

In the economy, the units interacting are economic entities that are capable of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities. They are known as institutional units.

Defining the units used in national accounts serves various purposes. First, units are the essential building blocks in defining economies in geographical terms, e.g. nations, regions, and nation groupings such as monetary or political unions. Second, they are the essential building blocks for grouping units into institutional sectors. Third, they are essential for defining which flows and stocks are recorded. Transactions between various parts of the same institutional unit are, in principle, not recorded in the national accounts.

2.02 The units and groupings of units used in national accounts shall be defined with reference to the kind of economic analysis for which they are intended, and not in terms of the types of unit usually employed in statistical inquiries. The latter units (e.g. enterprises, holding companies, kind-of-activity units, local units, government departments, non-profit institutions, households, etc.) may not be satisfactory for the purposes of national accounts, since they are based on criteria of a legal, administrative or accounting nature.

Statisticians shall take into account the definitions of units of analysis as laid down in the ESA 2010, in order to ensure that, in the surveys in which data are collected, all the elements of information needed to compile data based on the units of analysis used in the ESA 2010 are gradually introduced.

2.03 A feature of the ESA 2010 system is the use of types of unit corresponding to three ways of subdividing the economy:

((1) to analyse flows and positions, it is essential to select units which make it possible to study behavioural relationships among economic agents;

((2) to analyse the process of production, it is essential to select units that bring out relationships of a technico-economic nature, or that reflect local activities;

((3) to allow regional analyses, units that reflect local kinds of activity are needed.

Institutional units are defined to meet the first of these objectives. Behavioural relationships, as described in point (1), require units reflecting all of their institutional economic activity.

The production processes, technico-economic relationships and regional analyses referred to in points (2) and (3) require units such as local KAUs. These units are described later in this chapter.

Before giving definitions of the units used in the ESA 2010, it is necessary to define the limits of the national economy.

The limits of the national economy

2.04 The units which constitute the economy of a country and whose flows and stocks are recorded in the ESA 2010 are those which are resident. An institutional unit is resident in a country when it has its centre of predominant economic interest in the economic territory of that country. Such units are known as resident units, irrespective of nationality, legal form or presence on the economic territory at the time they carry out a transaction.

2.05 Economic territory consists of the following:

(a) the area (geographic territory) under the effective administration and economic control of a single government;

(b) any free zones, including bonded warehouses and factories under customs control;

(c) the national air-space, territorial waters and the continental shelf lying in international waters, over which the country enjoys exclusive rights;

(d) territorial enclaves, these being geographic territories situated in the rest of the world and used, under international treaties or agreements between states, by general government agencies of the country (such as embassies, consulates, military bases, scientific bases, etc.);

(e) deposits of oil, natural gas, etc. in international waters outside the continental shelf of the country, worked by units resident in the territory as defined in points (a) to (d).

Fishing boats, other ships, floating platforms and aircraft are treated in the ESA as mobile equipment, whether owned and/or operated by units resident in the country, or owned by non-residents and operated by resident units. Transactions involving the ownership (gross fixed capital formation) and use (renting, insurance, etc.) of mobile equipment are attributed to the economy of the country of which the owner and/or operator respectively are residents. In cases of financial leasing, a change of ownership is assumed.

Economic territory may be an area larger or smaller than that defined above. An example of a larger area is a currency union such as the European Monetary Union; an example of a smaller area is a part of a country such as a region.

2.06 Economic territory excludes extraterritorial enclaves.

Also excluded are the parts of the country's own geographic territory used by the following organisations:

(a) general government agencies of other countries;

(b) institutions and bodies of the European Union; and

(c) international organisations under international treaties between states.

The territories used by the institutions and bodies of the European Union and international organisations are separate economic territories. A feature of such territories is that the only residents are the institutions.

2.07 Centre of predominant economic interest indicates that a location exists within the economic territory of a country where a unit engages in economic activities and transactions on a significant scale, either indefinitely or over a finite but long period of time (a year or more). The ownership of land and buildings within the economic territory is deemed to be sufficient for the owner to have a centre of predominant economic interest there.

Enterprises are almost always connected to only a single economy. Taxation and other legal requirements tend to result in the use of a separate legal entity for operations in each legal jurisdiction. In addition, a separate institutional unit is identified for statistical purposes where a single legal entity has substantial operations in two or more territories (e.g. for branches, land ownership, and multi-territory enterprises). As a result of splitting such legal entities, the residence of each of the subsequently identified enterprises is clear. Centre of predominant economic interest does not mean that entities with substantial operations in two or more territories should not be split.

In the absence of any physical dimension to an enterprise, its residence is determined according to the economic territory under whose laws the enterprise is incorporated or registered.

2.08 Units deemed to be residents of a country can be subdivided into:

(a) units that are engaged in production, finance, insurance or redistribution, in respect of all their transactions except those relating to ownership of land and buildings;

(b) units which are principally engaged in consumption, in respect of all their transactions except those relating to ownership of land and buildings;

(c) all units in their capacity as owners of land and buildings with the exception of owners of extraterritorial enclaves which are part of the economic territory of other countries or are independent states.

2.09 For units other than households, in respect of all their transactions except those relating to ownership of land and buildings, the following two cases may be distinguished:

(a) activity is conducted exclusively on the economic territory of the country: units which carry out such activity are resident units of the country;

(b) activity is conducted for a year or more on the economic territories of several countries: only that part of the unit that has a centre of predominant economic interest in the economic territory of the country is deemed to be a resident unit of that country.

A resident institutional unit may be a notional resident unit, in respect of the activity conducted in the country for a year or more by a unit which is resident in another country. When the activity is carried on for less than a year, the activity remains part of the activities of the producer institutional unit and no separate institutional unit is recognised. When the activity is insignificant, even though lasting longer than a year, and for the installation of equipment abroad, no separate unit is recognised and the activities are recorded as that of the producing institutional unit.

2.10 Households, except in their capacity as owners of land and buildings, are resident units of the economic territory where they have a centre of predominant economic interest. They are resident irrespective of periods spent abroad of less than one year. They shall include, in particular, the following:

(a) border workers, defined as people who cross the frontier daily to work in a neighbouring country;

(b) seasonal workers, defined as people who leave the country for several months according to season, but less than a year, to work in another country;

(c) tourists, patients, students, visiting officials, businessmen, salesmen, artists and crew members who travel abroad;

(d) locally recruited staff working in the extraterritorial enclaves of foreign governments;

(e) the staff of the institutions of the European Union and of civilian or military international organisations which have their headquarters in extraterritorial enclaves;

(f) the official, civilian or military representatives of the government of the country (including their households) established in territorial enclaves.

Students are always treated as residents, irrespective of the length of their studies abroad.

2.11 All units, in their capacity as owners of land and/or buildings forming part of the economic territory, are resident units or notional resident units of the country in which that land or those buildings in question are located.

The institutional units

2.12 *Definition:* an institutional unit is an economic entity characterised by decision-making autonomy in the exercise of its principal function. A resident unit is regarded as constituting an institutional unit in the economic territory where it has its centre of predominant economic interest if it has decision-making autonomy and either keeps a complete set of accounts, or is able to compile a complete set of accounts.

To have autonomy of decision in respect of its principal function, an entity must be:

(a) entitled to own goods and assets in its own right; it will be able to exchange the ownership of goods and assets in transactions with other institutional units;

(b) able to take economic decisions and engage in economic activities for which it is responsible and accountable at law;

(c) able to incur liabilities on its own behalf, to take on other obligations or further commitments and to enter into contracts; and

(d) able to draw up a complete set of accounts, comprised of accounting records covering all its transactions carried out during the accounting period, as well as a balance sheet of assets and liabilities.

2.13 The following principles apply whenever an entity does not possess the characteristics of an institutional unit:

(a) households are deemed to enjoy autonomy of decision in respect of their principal function and are, therefore, institutional units nonetheless, even though they do not keep a complete set of accounts;

(b) entities which do not keep a complete set of accounts, and are not able to compile a complete set of accounts if required to do so, are not institutional units;

(c) entities which, while keeping a complete set of accounts, have no autonomy of decision, are part of the units which control them;

(d) entities do not need to publish accounts to be an institutional unit;

(e) entities forming part of a group of units engaged in production and keeping a complete set of accounts are deemed to be institutional units even if they have partially surrendered their autonomy of decision to the central body (the head office) responsible for the general direction of the group; the head office itself is deemed to be an institutional unit distinct from the units which it controls;

(f) quasi-corporations are entities which keep a complete set of accounts and have no legal status. They have an economic and financial behaviour that is different from that of their owners and similar to that of corporations. They are deemed to have autonomy of decision and are considered as distinct institutional units.

Head offices and holding companies

2.14 Head offices and holding companies are institutional units. The two types are:

(a) A head office is a unit that exercises managerial control over its subsidiaries. Head offices are allocated to the dominant non-financial corporations sector of their subsidiaries, unless all or most of their subsidiaries are financial corporations, in which case they are treated as financial auxiliaries (S.126) in the financial corporations sector.

Where there is a mixture of non-financial and financial subsidiaries, then the predominant share-by-value-added determines the sector classification.

Head offices are described under international standard industrial classification of all economic activities revision (ISIC Rev. 4), Section M, class 7010 (NACE Rev. 2, M 70.10) as follows:

This class includes the overseeing and managing of other units of the company or enterprise; undertaking strategic or organisational planning and decision-making role of the company or enterprise; exercising operational control and managing the day-to-day operation of their related units.

(b) A holding company that holds the assets of subsidiary corporations but does not undertake any management activities is a captive financial institution (S.127) and classified as a financial corporation.

Holding companies are described under ISIC Rev.4, Section K, class 6420 (NACE Rev. 2, K 64.20) as follows:

This class includes the activities of holding companies, i.e. units that hold the assets (owning controlling-levels of equity) of a group of subsidiary corporations and whose principal activity is owning the group. The holding companies in this class do not provide any other service to the businesses in which the equity is held, i.e. they do not administer or manage other units.

Groups of corporations

2.15 Large groups of corporations are created when a parent controls several subsidiaries, which may in turn control their own subsidiaries, and so on.

Each member of the group is treated as a separate institutional unit if it satisfies the definition of an institutional unit.

2.16 An advantage of not treating groups of corporations as single institutional units is that groups are not always stable over time, nor easily identifiable in practice. It can be difficult to obtain data on groups whose activities are not closely integrated. Many groups are too large and heterogeneous to be treated as single units, and their size and composition can change over time as a result of mergers and takeovers.

Special purpose entities

2.17 A special purpose entity (SPE) or special purpose vehicle (SPV) is usually a limited company or a limited partnership, created to fulfil narrow, specific or temporary objectives and to isolate a financial risk, a specific taxation or a regulatory risk.

2.18 There is no common definition of an SPE, but the following characteristics are typical:

(a) they have no employees and no non-financial assets;

(b) they have little physical presence beyond a 'brass plate' or sign confirming their place of registration;

(c) they are always related to another corporation, often as a subsidiary;

(d) they are resident in a different territory from the territory of residence of the related corporations. In the absence of any physical presence an enterprise's residence is determined according to the economic territory under whose laws the enterprise is incorporated or registered;

(e) they are managed by employees of another corporation which may or may not be a related one. The SPE pays fees for services provided to it and in turn charges its parent or other related corporation a fee to cover those costs. This is the only production the SPE is involved in, although it will often incur liabilities on behalf of its owner and will usually receive investment income and holding gains on the assets it holds.

2.19 Whether a unit has all or none of these characteristics, and whether it is described as an SPE or some similar designation or not, it shall be treated in the same way as any other institutional unit by being allocated to sector and industry according to its principal activity unless the SPE has no independent rights of action.

2.20 So captive financial institutions, artificial subsidiaries and special purpose units of general government with no independence of action are allocated to the sector of their controlling body. The exception occurs when they are non-resident, in which case they are recognised separately from their controlling body. But in the case of government, the activities of the subsidiary shall be reflected in the government accounts.

Captive financial institutions

2.21 A holding company that simply owns the assets of subsidiaries is one example of a captive financial institution. *Examples of other* units that are also treated as captive financial institutions are units with the characteristics of SPEs as described above, including investment and pension funds and units used for holding and managing wealth for individuals or families, issuing debt securities on behalf of related companies (such a company may be called a conduit), and *carrying out* other financial functions.

2.22 The degree of independence from its parent may be demonstrated by exercising some substantive control over its assets and liabilities to the extent of carrying the risks and reaping the rewards associated with the assets and liabilities. Such units are classified in the financial corporations sector.

2.23 An entity of this type that cannot act independently of its parent and is simply a passive holder of assets and liabilities (sometimes described as being on autopilot) is not treated as a separate institutional unit unless it is resident in an economy different from that of its parent. If it is resident in the same economy as its parent, it is treated as an 'artificial subsidiary' as described below.

Artificial subsidiaries

2.24 A subsidiary, wholly owned by a parent corporation, may be created to provide services to the parent corporation, or other corporations in the same group, in order to avoid taxes, to minimise liabilities in the event of bankruptcy, or to secure other technical advantages under the tax or corporation legislation in force in a particular country.

2.25 In general, such types of entities do not satisfy the definition of an institutional unit because they lack the ability to act independently from their parent corporation and may be subject to restrictions on their ability to hold or transact assets held on their balance sheets. Their level of output and the price they receive for it are determined by the parent that (possibly with other corporations in the same group) is their sole client. They are, thus, not treated as separate institutional units, but are treated as an integral part of the parent, and their accounts are consolidated with those of the parent, unless they are resident in an economic territory different from that where the parent is resident.

2.26 A distinction must be made between artificial subsidiaries as just described and a unit undertaking only ancillary activities. Ancillary activities are limited in scope to the type of service functions that virtually all enterprises need to some extent or another such as cleaning premises, running the staff payroll or providing the information technology infrastructure for the enterprise (see Chapter 1, paragraph 1.31).

Special purpose units of general government

2.27 General government may also set up special purpose units, with characteristics and functions similar to the captive financial institutions and artificial subsidiaries. Such units do not have the power to act independently and are restricted in the range of transactions they can engage in. They do not carry the risks and rewards associated with the assets and liabilities they hold. Such units, if they are resident, shall be treated as an integral part of general government and not as separate units. If they are non-resident, they shall be treated as separate units. Any transactions carried out by them abroad shall be reflected in corresponding transactions with government. Thus, a unit that borrows abroad is then regarded as lending the same amount to general government, and on the same terms, as the original borrowing.

2.28 In summary, the accounts of SPEs with no independent rights of action are consolidated with the parent corporation, unless they are resident in a different economy from that of the parent. There is one exception to this general rule, and that is when a non-resident SPE is set up by government.

2.29 Notional resident units shall be defined as:

(a) those parts of non-resident units which have a centre of predominant economic interest (being, in most cases, units which engage in economic production for a year or more) on the economic territory of the country;

(b) non-resident units in their capacity as owners of land and/or buildings on the economic territory of the country, but only in respect of transactions affecting such land or buildings.

Notional resident units, irrespective of only keeping partial accounts and irrespective of autonomy of decision, shall be treated as institutional units.

2.30 The following shall be considered as institutional units:

(a) units that have autonomy of decision and a complete set of accounts such as:

(1) private and public corporations;

(2) cooperatives or partnerships recognised as independent legal entities;

(3) public producers which by virtue of special legislation are recognised as independent legal entities;

(4) non-profit institutions recognised as independent legal entities; and

(5) agencies of general government;

(b) units which have a complete set of accounts and which are deemed to have autonomy of decision despite not having separate incorporation from their parent: quasi-corporations;

(c) units which do not necessarily keep a complete set of accounts, but which are deemed to have autonomy of decision, namely:

(1) households;

(2) notional resident units.

The institutional sectors

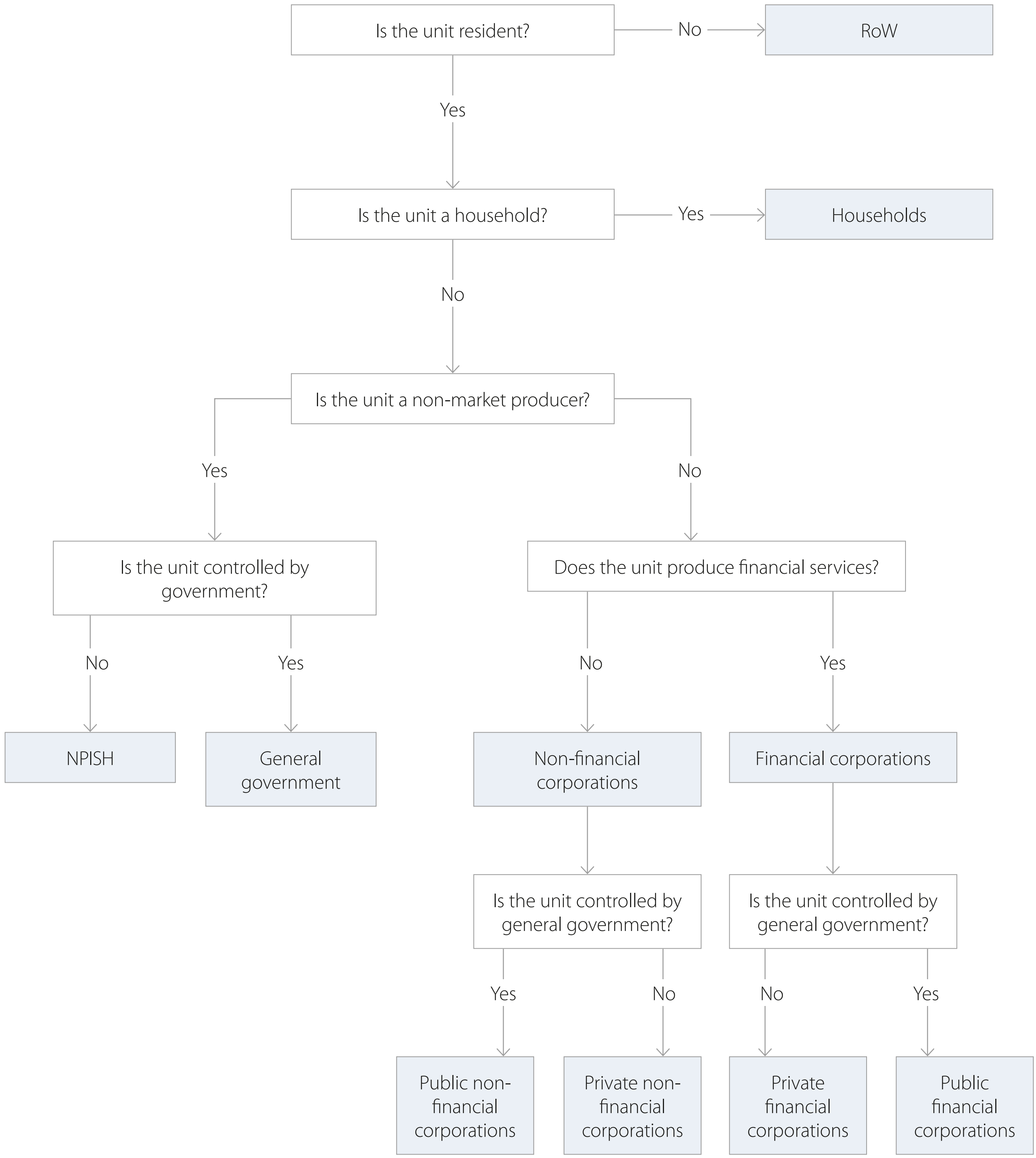
2.31 Macroeconomic analysis does not consider the actions of each institutional unit separately — it considers the aggregate activities of similar institutions. So units are combined into groups called institutional sectors, some of which are divided into subsectors.

2.32 Each sector and subsector groups together the institutional units which have a similar type of economic behaviour.

Table 2.1 — Sectors and subsectors

Sectors and subsectors				Public	National private	Foreign controlled
Non-financial corporations			S.11	S.11001	S.11002	S.11003
Financial corporations			S.12			
Monetary financial institutions (MFIs)	Central bank		S.121			
	Other monetary financial institutions (OMFI)	Deposit-taking corporations except the central bank	S.122	S.12201	S.12202	S.12203
		Money market funds (MMFs)	S.123	S.12301	S.12302	S.12303
Financial corporations except MFIs and Insurance corporations and pension funds (ICPFs)	Non-MMF investment funds		S.124	S.12401	S.12402	S.12403
	Other financial intermediaries, except insurance corporations and pension funds		S.125	S.12501	S.12502	S.12503
	Financial auxiliaries		S.126	S.12601	S.12602	S.12603
	Captive financial institutions and money lenders		S.127	S.12701	S.12702	S.12703
ICPFs	Insurance corporations (IC)		S.128	S.12801	S.12802	S.12803
	Pension funds (PF)		S.129	S.12901	S.12902	S.12903
General government			S.13			
Central government (excluding social security funds)			S.1311			
State government (excluding social security funds)			S.1312			
Local government (excluding social security funds)			S.1313			
Social security funds			S.1314			
Households			S.14			
Employers and own-account workers			S.141+S.142			
Employees			S.143			
Recipients of property and transfer income			S.144			
Recipients of property income			S.1441			
Recipients of pensions			S.1442			
Recipients of other transfers			S.1443			
Non-profit institutions serving households			S.15			
Rest of the world			S.2			
Member States and institutions and bodies of the European Union			S.21			
Member States of the European Union			S.211			
Institutions and bodies of the European Union			S.212			
Non-member countries and international organisations non-resident in the European Union			S.22			

Diagram 2.1 — Allocation of units to sectors



2.33 The institutional units are grouped into sectors on the basis of the type of producer they are and depending on their principal activity and function, which are considered to be indicative of their economic behaviour.

2.34 Diagram 2.1 shows how units are allocated to the main sectors. In order to determine the sector of a unit which is resident and not a household, according to the diagram, it is necessary to determine whether it is controlled by general government or not, and whether it is a market or a non-market producer.

2.35 Control over a financial or non-financial corporation shall be defined as the ability to determine general corporate policy, for example by choosing appropriate directors if necessary.

2.36 A single institutional unit (another corporation, a household, a non-profit institution or a government unit) secures control over a corporation or quasi-corporation by owning more than half the voting shares or otherwise controlling more than half the shareholders' voting power.

2.37 In order to control more than half the shareholders' voting power, an institutional unit need not own any of the voting shares itself. A given corporation, corporation C, could be a subsidiary of another corporation B in which a third corporation A owns a majority of the voting shares. Corporation C is said to be subsidiary of corporation B when either corporation B controls more than half of the shareholders' voting power in corporation C or corporation B is a shareholder in C with the right to appoint or remove a majority of the directors of C.

2.38 General government secures control over a corporation as a result of special legislation, decree or regulation which empowers the government to determine corporate policy. The following indicators are the main factors to consider in deciding whether a corporation is controlled by government:

(a) government ownership of the majority of the voting interest;

(b) government control of the board or governing body;

(c) government control of the appointment and removal of key personnel;

(d) government control of key committees in the entity;

(e) government possession of a golden share;

(f) special regulations;

(g) government as a dominant customer;

(h) borrowing from government.

A single indicator may be sufficient to establish control, but, in other cases, a number of separate indicators may collectively indicate control.

2.39 For non-profit institutions recognised as independent legal entities, the five indicators of control to be considered are:

(a) the appointment of officers;

(b) the provisions of enabling instruments;

(c) contractual agreements;

(d) the degree of financing;

(e) the degree of government risk exposure.

As with corporations, a single indicator may be sufficient to establish control in some cases, but, in other cases, a number of separate indicators may collectively indicate control.

2.40 Differentiating between market and non-market, and so for public sector entities classification between the general government sector and the corporations sector, depends on the criteria set out in paragraph 1.37.

2.41 A sector shall be divided into subsectors according to the criteria relevant to that sector; for example government can be split into central, state and local government and social security funds. This permits a more precise description of the economic behaviour of the units.

The accounts for sectors and subsectors record all the activities, whether principal or secondary, of the institutional units covered by the appropriate sector.

Each institutional unit belongs to only one sector or subsector.

2.42 When the principal function of the institutional unit is to produce goods and services, the type of producer must be decided first, in order to allocate it to a sector.

2.43 Table 2.2 shows the type of producer and the principal activities and functions that are characteristic of each sector:

Table 2.2 — Type of producer and principal activities and functions classified by sector

Type of producer	Principal activity and function	Sector
Market producer	Production of market goods and non-financial services	Non-financial corporations (S.11)
Market producer	Financial intermediation including insurance Auxiliary financial activities	Financial corporations (S.12)
Public non-market producer	Production and supply of non-market output for collective and individual consumption, and carrying out transactions intended to redistribute national income and wealth	General government (S.13)
Market producer or private producer for own final use	Consumption Production of market output and output for own final use	Households (S.14) As consumers As entrepreneurs
Private non-market producer	Production and supply of non-market output for individual consumption	Non-profit institutions serving households (S.15)

2.44 The rest of the world (S.2) sector refers to flows and positions between resident units and non-resident units — the non-resident units are not characterised by similar objectives and types of behaviour, but are only recognised through their flows and positions with resident units.

Non-financial corporations (S.11)

2.45 *Definition:* the non-financial corporations sector (S.11) consists of institutional units which are independent legal entities and market producers, and whose principal activity is the production of goods and non-financial services. The non-financial corporations sector also includes non-financial quasi-corporations (see paragraph 2.13(f)).

2.46 The institutional units covered are the following:

(a) private and public corporations which are market producers principally engaged in the production of goods and non-financial services;

(b) cooperatives and partnerships recognised as independent legal entities which are market producers principally engaged in the production of goods and non-financial services;

(c) public producers which are recognised as independent legal entities and which are market producers principally engaged in the production of goods and non-financial services;

(d) non-profit institutions or associations serving non-financial corporations, which are recognised as independent legal entities and which are market producers principally engaged in the production of goods and non-financial services;

(e) head offices controlling a group of corporations which are market producers, where the preponderant type of activity of the group of corporations as a whole - measured on the basis of value added — is the production of goods and non-financial services;

(f) SPEs whose principal activity is the provision of goods or non-financial services;

(g) private and public quasi-corporations which are market producers principally engaged in the production of goods and non-financial services.

2.47 Non-financial quasi-corporations are all entities which are market producers principally engaged in the production of goods and non-financial services and which meet the conditions qualifying them as quasi-corporations (see point (f) of paragraph 2.13).

Non-financial quasi-corporations must keep enough information to enable a complete set of accounts to be drawn up, and are operated as if they were corporations. The de facto relationship to their owner is that of a corporation to its shareholders.

Non-financial quasi-corporations owned by households, government units or non-profit institutions are grouped with non-financial corporations in the non-financial corporations sector, and not in the sector of their owner.

2.48 The existence of a complete set of accounts, including balance sheets, is not a sufficient condition for market producers to be treated as institutional units such as quasi-corporations. Partnerships and public producers, other than those included under points (a), (b), (c) and (f) of paragraph 2.46 and sole proprietorships — even if they keep a complete set of accounts — are in general not distinct institutional units because they do not enjoy autonomy of decision, their management being under the control of the households, non-profit institutions or governments which own them.

2.49 Non-financial corporations include notional resident units which are treated as quasi-corporations.

2.50 The non-financial corporations sector is divided into three subsectors:

(a) public non-financial corporations (S.11001);

(b) national private non-financial corporations (S.11002);

(c) foreign controlled non-financial corporations (S.11003).

Public non-financial corporations (S.11001)

2.51 *Definition:* the public non-financial corporations subsector consists of all non-financial corporations, quasi-corporations and non-profit institutions, recognised as independent legal entities, that are market producers and are subject to control by government units.

2.52 Public quasi-corporations are quasi-corporations owned directly by government units.

National private non-financial corporations (S.11002)

2.53 *Definition:* the national private non-financial corporations subsector consists of all non-financial corporations, quasi-corporations and non-profit institutions which are recognised as independent legal entities and which are market producers, that are not controlled by government or by non-resident institutional units.

This subsector includes corporate and quasi-corporate direct foreign investment units not classified in the foreign controlled non-financial corporations subsector (S.11003).

Foreign controlled non-financial corporations (S.11003)

2.54 *Definition:* the foreign controlled non-financial corporations subsector consists of all non-financial corporations and quasi-corporations that are controlled by non-resident institutional units.

This subsector includes:

(a) all subsidiaries of non-resident corporations;

(b) all corporations controlled by a non-resident institutional unit that is not itself a corporation; for example, a corporation which is controlled by a foreign government. It includes corporations controlled by a group of non-resident units acting in concert;

(c) all branches or other unincorporated agencies of non-resident corporations or unincorporated producers which are notional resident units.

Financial corporations (S.12)

2.55 *Definition:* the financial corporations sector (S.12) consists of institutional units which are independent legal entities and market producers, and whose principal activity is the production of financial services. Such institutional units comprise all corporations and quasi-corporations which are principally engaged in:

(a) financial intermediation (financial intermediaries); and/or

(b) auxiliary financial activities (financial auxiliaries).

Also included are institutional units providing financial services, where most of either their assets or their liabilities are not transacted on open markets.

2.56 Financial intermediation is the activity in which an institutional unit acquires financial assets and incurs liabilities on its own account by engaging in financial transactions on the market. The assets and liabilities of financial intermediaries are transformed or repackaged in relation to, for example, maturity, scale, risk, etc. in the financial intermediation process.

Auxiliary financial activities are activities related to financial intermediation but which do not involve financial intermediation themselves.

Financial intermediaries

2.57 The financial intermediation process channels funds between third parties with a surplus and those with a lack of funds. A financial intermediary does not only act as an agent for other institutional units, but places itself at risk by acquiring financial assets and incurring liabilities on its own account.

2.58 In the financial intermediation process, all categories of liabilities may be involved with the exception of the liability category of other accounts payable (AF.8). The financial assets involved in the financial intermediation process may be classified in any category with the exception of the category of insurance, pension and standardised guarantee schemes (AF.6) but including the other accounts receivable category. Financial intermediaries may invest their funds in non-financial assets including real estate. In order to be considered a financial intermediary, a corporation should incur liabilities on the market and transform funds. Real estate corporations are not financial intermediaries.

2.59 The function of insurance corporations and pension funds consists of the pooling of risks. The liabilities of such institutions are insurance, pension and standardised guarantee schemes (AF.6). The counterparts of liabilities are investments by the insurance corporations and pension funds, acting as financial intermediaries.

2.60 Investment funds, hereinafter referred to as money market funds (MMFs) and non-money market funds (non-MMFs), primarily incur liabilities through the issue of investment fund shares or units (AF.52). They transform such funds by acquiring financial assets and/or real estate. Investment funds are classified as financial intermediaries. Any change in the value of their assets and liabilities other than their own shares is reflected in their own funds (see paragraph 7.07). Given that the amount of own funds equals the value of the investment fund's shares or units, any change in the value of the fund's assets and liabilities will be reflected in the market value of such shares or units. Investment funds investing in real estate are financial intermediaries.

2.61 Financial intermediation is limited to acquiring assets and incurring liabilities with the general public or specified and relatively large sub-groups thereof. Where the activity is limited to small groups of persons or families, no financial intermediation takes place.

2.62 Exceptions to the general limitation of financial intermediation to financial transactions on the market may exist. Examples are municipal credit and savings banks which rely on the municipality involved, or financial lease corporations that depend on a parent group of companies for acquiring funds or investing funds. Their lending or their acceptance of savings shall be independent of the municipality involved or the parent group, respectively, in classifying them as financial intermediaries.

Financial auxiliaries

2.63 Auxiliary financial activities comprise auxiliary activities for realising transactions in financial assets and liabilities or the transformation or repackaging of funds. Financial auxiliaries do not put themselves at risk by acquiring financial assets or incurring liabilities. They facilitate financial intermediation. Head offices, all or most of the subsidiaries of which are financial corporations, are financial auxiliaries.

Financial corporations other than financial intermediaries and financial auxiliaries

2.64 Other financial corporations other than financial intermediaries and financial auxiliaries are institutional units providing financial services, where most of either their assets or their liabilities are not transacted on open markets.

Institutional units included in the financial corporations sector

2.65 The institutional units included in the financial corporations sector (S.12) are the following:

(a) private or public corporations which are principally engaged in financial intermediation and/or in auxiliary financial activities;

(b) cooperatives and partnerships recognised as independent legal entities which are principally engaged in financial intermediation and/or in auxiliary financial activities;

(c) public producers recognised as legal entities, which are principally engaged in financial intermediation and/or in auxiliary financial activities;

(d) non-profit institutions recognised as legal entities which are principally engaged in financial intermediation and/or in auxiliary financial activities, or which are serving financial corporations;

(e) head offices when all or most of their subsidiaries are, as financial corporations, principally engaged in financial intermediation and/or financial auxiliary activities. These head offices are classified as financial auxiliaries (S.126);

(f) holding companies, where the main role is the holding of assets of a group of subsidiary corporations. The make-up of the group can be financial or non-financial — this does not affect the classification of holding companies as captive financial institutions (S.127);

(g) SPEs whose principal activity is the provision of financial services;

(h) unincorporated investment funds comprising investment portfolios owned by the group of participants, and whose management is undertaken, in general, by other financial corporations. Such funds are institutional units, separate from the managing financial corporation;

(i) unincorporated units principally engaged in financial intermediation and subject to regulation and supervision (in most cases classified as deposit-taking corporations except the central bank, insurance corporations or pension funds) are deemed to enjoy autonomy of decision and to have autonomous management independent of their owners; their economic and financial behaviour is similar to that of financial corporations. In this case they are treated as separate institutional units. Examples are branches of non-resident financial corporations.

Subsectors of financial corporations

2.66 The financial corporations sector is subdivided into the following subsectors:

(a) central bank (S.121);

(b) deposit-taking corporations except the central bank (S.122);

(c) money market funds (MMFs) (S.123);

(d) non-MMF investment funds (S.124);

(e) other financial intermediaries, except insurance corporations and pension funds (S.125);

(f) financial auxiliaries (S.126);

(g) captive financial institutions and money lenders (S.127);

(h) insurance corporations (S.128); and

(i) pension funds (S.129).

Combining subsectors of financial corporations

2.67 Monetary financial institutions (MFIs) as defined by the ECB consist of all institutional units included in the central bank (S.121), deposit-taking corporations except the central bank (S.122) and MMF (S.123) subsectors.

2.68 Other monetary financial institutions consist of those financial intermediaries through which the effects of the monetary policy of the central bank (S.121) are transmitted to the other entities of the economy. They are deposit-taking corporations except the central bank (S.122) and MMF (S.123).

2.69 Financial intermediaries dealing with the pooling of risks are insurance corporations and pensions funds (ICPF). They consist of the insurance corporations (S.128) and pension funds (S.129) subsectors.

2.70 Financial corporations except MFI and ICPF consist of the non-MMF investment funds (S.124), other financial intermediaries, except insurance corporations and pension funds (S.125), financial auxiliaries (S.126) and captive financial institutions and money lenders (S.127) subsectors.

Subdividing subsectors of financial corporations into public, national private and foreign controlled financial corporations

2.71 With the exception of subsector S.121, each subsector is further subdivided into:

(a) public financial corporations;

(b) national private financial corporations; and

(c) foreign controlled financial corporations.

The criteria for this subdivision are the same as for non-financial corporations (see paragraphs 2.51 to 2.54).

Table 2.3 — Financial corporations sector and its subsectors

Sectors and subsectors				Public	National private	Foreign controlled
Financial corporations			S.12			
Monetary financial institutions (MFI)	Central bank		S.121			
	Other monetary financial institutions (OMFI)	Deposit-taking corporations except the central bank	S.122	S.12201	S.12202	S.12203
		MMF	S.123	S.12301	S.12302	S.12303
Financial corporations except MFI and ICPF	Non-MMF investment funds		S.124	S.12401	S.12402	S.12403
	Other financial intermediaries, except insurance corporations and pension funds		S.125	S.12501	S.12502	S.12503
	Financial auxiliaries		S.126	S.12601	S.12602	S.12603
	Captive financial institutions and money lenders		S.127	S.12701	S.12702	S.12703
Insurance corporations and pension funds (ICPFs)	Insurance corporations (IC)		S.128	S.12801	S.12802	S.12803
	Pension funds (PF)		S.129	S.12901	S.12902	S.12903

Central bank (S.121)

2.72 *Definition:* the central bank subsector (S.121) consists of all financial corporations and quasi-corporations whose principal function is to issue currency, to maintain the internal and external value of the currency and to hold all or part of the international reserves of the country.

2.73 The following financial intermediaries are classified in subsector S.121:

(a) the national central bank, including when it is part of a European system of central banks;

(b) central monetary agencies of essentially public origin (e.g. agencies managing foreign exchange or issuing currency) which keep a complete set of accounts and enjoy autonomy of decision in relation to central government. When these activities are performed either within central government or within the central bank, no separate institutional units exist.

2.74 Subsector S.121 does not include agencies and bodies, other than the central bank, which regulate or supervise financial corporations or financial markets. They are classified in subsector S.126.

Deposit-taking corporations except the central bank (S.122)

2.75 *Definition:* the deposit-taking corporations except the central bank *subsector* (S.122) includes all financial corporations and quasi-corporations, except those classified in the central bank and in the MMF subsectors, which are principally engaged in financial intermediation and whose business is to receive deposits *and/or close substitutes for deposits* from institutional units, *hence not only from MFIs,* and, for their own account, to grant loans and/or to make investments in securities.

2.76 Deposit-taking corporations except the central bank cannot be described simply as 'banks', because they may include some financial corporations which do not call themselves banks, or some financial corporations which are not permitted to do so in some countries, while some other financial corporations describing themselves as banks may not in fact be deposit-taking corporations. The following financial intermediaries are classified in sub-sector S.122:

(a) commercial banks, 'universal' banks, 'all-purpose' banks;

(b) savings banks (including trustee savings banks and savings banks and loan associations);

(c) post office giro institutions, post banks, giro banks;

(d) rural credit banks, agricultural credit banks;

(e) cooperative credit banks, credit unions;

(f) specialised banks (e.g. merchant banks, issuing houses, private banks); and

(g) electronic money institutions principally engaged in financial intermediation.

2.77 The following financial intermediaries are classified in subsector S.122 where it is their business to receive repayable funds from the public, whether in the form of deposits or in other forms such as the continuing issue of long-term debt securities:

(a) corporations engaged in granting mortgages (including building societies, mortgage banks and mortgage credit institutions);

(b) municipal credit institutions.

Otherwise, financial intermediaries are classified in subsector S.124.

2.78 Subsector S.122 does not include:

(a) head offices which oversee and manage other units of a group consisting predominantly of deposit-taking corporations except the central bank, but which are not deposit-taking corporations. Such head offices are classified in subsector S.126;

(b) non-profit institutions recognised as independent legal entities serving deposit-taking corporations, but not engaged in financial intermediation. They are classified in subsector S.126; and

(c) electronic money institutions not principally engaged in financial intermediation.

MMF (S.123)

2.79 *Definition:* the MMF subsector (S.123) consists of all financial corporations and quasi-corporations, except those classified in the central bank and in the credit institutions subsectors, which are principally engaged in financial intermediation. Their business is to issue investment fund shares or units as close substitutes for deposits from institutional units, and, for their own account, to make investments primarily in money market fund shares/units, short-term debt securities, and/or deposits.

2.80 The following financial intermediaries are classified in subsector S.123: investment funds including investment trusts, unit trusts and other collective investment schemes whose shares or units are close substitutes for deposits.

2.81 Subsector S.123 does not include:

(a) head offices which oversee and manage a group consisting predominantly of MMFs, but which are not MMFs themselves. They are classified in subsector S.126;

(b) non-profit institutions recognised as independent legal entities serving MMFs, but not engaged in financial intermediation. They are classified in subsector S.126.

Non-MMF investment funds (S.124)

2.82 *Definition:* the non-MMF investment funds subsector (S.124) consists of all collective investment schemes, except those classified in the MMF subsector, which are principally engaged in financial intermediation. Their business is to issue investment fund shares or units which are not close substitutes for deposits, and, on their own account, to make investments primarily in financial assets other than short-term financial assets and in non-financial assets (usually real estate).

2.83 Non-MMF investment funds cover investment trusts, unit trusts and other collective investment schemes whose investment fund shares or units are not seen as close substitutes for deposits.

2.84 The following financial intermediaries are classified in subsector S.124:

(a) open-ended investment funds whose investment fund shares or units are, at the request of the holders, repurchased or redeemed directly or indirectly out of the undertaking's assets;

(b) closed-ended investment funds with a fixed share capital, where investors entering or leaving the fund must buy or sell existing shares;

(c) real estate investment funds;

(d) investment funds investing in other funds ('funds of funds');

(e) hedge funds covering a range of collective investment schemes, involving high minimum investments, light regulation, and a range of investment strategies.

2.85 Subsector S.124 does not include:

(a) pension funds which are part of the pension funds subsector;

(b) special purpose government funds, called sovereign wealth funds. A special purpose government fund is classified as captive financial institution if it is a financial corporation. The classification of a 'special purpose government fund' either as part of general government sector or as part of the financial corporation sector shall be determined according to the criteria concerning special purpose units of general government set out in paragraph 2.27;

(c) head offices which oversee and manage a group consisting predominantly of non-MMF investment funds, but which are not investment funds themselves. They are classified in subsector S.126;

(d) non-profit institutions recognised as independent legal entities serving non-MMF investment funds, but not engaged in financial intermediation. They are classified in subsector S.126.

Other financial intermediaries, except insurance corporations and pension funds (S.125)

2.86 *Definition:* the other financial intermediaries, except insurance corporations and pension funds subsector (S.125) consists of all financial corporations and quasi-corporations which are principally engaged in financial intermediation by incurring liabilities in forms other than currency, deposits, or investment fund shares, or in relation to insurance, pension and standardised guarantee schemes from institutional units.

2.87 Subsector S.125 includes financial intermediaries predominantly engaged in long-term financing. In most cases, this predominant maturity distinguishes that subsector from the OMFI subsectors (S.122 and S.123). Based on the non-existence of liabilities in the form of investment fund shares which are not seen as close substitutes for deposits or insurance, pension and standardised guarantee schemes, the borderline with the non-MMF investment funds (S.124), the insurance corporations (S.128), and the pension funds (S.129) subsectors can be determined.

2.88 The other financial intermediaries, except insurance corporations and pension funds subsector (S.125) is further subdivided into subsectors consisting of financial vehicle corporations engaged in securitisation transactions (FVC), security and derivative dealers, financial corporations engaged in lending, and specialised financial corporations. This is shown in Table 2.4.

Table 2.4 —Other financial intermediaries, except insurance corporations and pension funds subsector (S.125) and its subdivisions

Other financial intermediaries, except insurance corporations and pension funds
Financial vehicle corporations engaged in securitisation transactions (FVC);
Security and derivative dealers;
Financial corporations engaged in lending; and
Specialised financial corporations

2.89 Subsector S.125 does not include non-profit institutions recognised as independent legal entities serving other financial intermediaries, but not engaged in financial intermediation. They are classified in subsector S.126.

Financial vehicle corporations engaged in securitisation transactions (FVC)

2.90 *Definition:* financial vehicle corporations engaged in securitisation transactions (FVC) are undertakings carrying out securitisation transactions. FVC that satisfy the criteria of an institutional unit are classified in S.125, otherwise they are treated as an integral part of the parent.

Security and derivative dealers, financial corporations engaged in lending and specialised financial corporations

2.91 Security and derivative dealers (on own account) are financial intermediaries on own account.

2.92 Financial corporations engaged in lending include for example financial intermediaries engaged in:

(a) financial leasing;

(b) hire purchase and the provision of personal or commercial finance; or

(c) factoring.

2.93 Specialised financial corporations are financial intermediaries, for example:

(a) venture and development capital companies;

(b) export/import financing companies; or

(c) financial intermediaries which acquire deposits and/or close substitutes for deposits, or incur loans vis-à-vis monetary financial institutions only; these financial intermediaries cover also central counterparty clearing houses (CCPs) carrying out inter-MFI repurchase agreement transactions.

2.94 Head offices which oversee and manage a group of subsidiaries principally engaged in financial intermediation and/or in auxiliary financial activities are classified in subsector S.126.

Financial auxiliaries (S.126)

2.95 *Definition:* the financial auxiliaries subsector (S.126) consists of all financial corporations and quasi-corporations which are principally engaged in activities closely related to financial intermediation but which are not financial intermediaries themselves.

2.96 The following financial corporations and quasi-corporations are classified in subsector S.126:

(a) insurance brokers, salvage and average administrators, insurance and pension consultants, etc.;

(b) loan brokers, securities brokers, investment advisers, etc.;

(c) flotation corporations that manage the issue of securities;

(d) corporations whose principal function is to guarantee, by endorsement, bills and similar instruments;

(e) corporations which arrange derivative and hedging instruments, such as swaps, options and futures (without issuing them);

(f) corporations providing infrastructure for financial markets;

(g) central supervisory authorities of financial intermediaries and financial markets when they are separate institutional units;

(h) managers of pension funds, mutual funds, etc.;

(i) corporations providing stock exchange and insurance exchange;

(j) non-profit institutions recognised as independent legal entities serving financial corporations, but not engaged in financial intermediation (see point (d) of paragraph 2.46);

(k) payment institutions (facilitating payments between buyer and seller).

2.97 Subsector S.126 also includes head offices whose subsidiaries are all or mostly financial corporations.

Captive financial institutions and money lenders (S.127)

2.98 *Definition:* the captive financial institutions and money lenders subsector (S.127) consists of all financial corporations and quasi-corporations which are neither engaged in financial intermediation nor in providing financial auxiliary services, and where most of either their assets or their liabilities are not transacted on open markets.

2.99 In particular, the following financial corporations and quasi-corporations are classified in subsector S.127:

(a) units as legal entities such as trusts, estates, agencies accounts or 'brass plate' companies;

(b) holding companies that hold controlling-levels of equity of a group of subsidiary corporations and whose principal activity is owning the group without providing any other service to the businesses in which the equity is held, that is, they do not administer or manage other units;

(c) SPEs that qualify as institutional units and raise funds in open markets to be used by their parent corporation;

(d) units which provide financial services exclusively with own funds, or funds provided by a sponsor, to a range of clients and incur the financial risk of the debtor defaulting. Examples are money lenders, corporations engaged in lending to students or for foreign trade from funds received from a sponsor such as a government unit or a non-profit institution, and pawnshops that predominantly engage in lending;

(e) special purpose government funds, usually called sovereign wealth funds, if classified as financial corporations.

Insurance corporations (S.128)

2.100 *Definition:* the insurance corporations subsector (S.128) consists of all financial corporations and quasi-corporations which are principally engaged in financial intermediation as a consequence of the pooling of risks mainly in the form of direct insurance or reinsurance (see paragraph 2.59).

2.101 Insurance corporations provide services of:

(a) life and non-life insurance to individual units or groups of units;

(b) reinsurance to other insurance corporations.

2.102 Services of non-life insurance corporations may be provided in the form of insurance against the following:

(a) fire (e.g. commercial and private property);

(b) liability (casualty);

(c) motor (own damage and third party liability);

(d) marine, aviation and transport (including energy risks);

(e) accident and health; or

(f) financial insurance (provision of guarantees or surety bonds).

Financial insurance or credit insurance corporations, also called guarantee banks, provide guarantees or surety bonds to back securitisation and other credit products.

2.103 Insurance corporations are mainly incorporated or mutual entities. Incorporated entities are owned by shareholders and many are listed on stock exchanges. Mutuals are owned by their policyholders and return their profits to the 'with profits' or 'participating' policyholders through dividends or bonuses. 'Captive' insurers are normally owned by a non-financial corporation and mostly insure the risks of their shareholders.

Box 2.1 — Types of insurance

<table>
<tr><th colspan="3">Type of insurance</th><th>Sector/subsector</th></tr>
<tr><td rowspan="2">Direct insurance</td><td colspan="2">Life insurance
Policyholder makes regular or one-off payments to an insurer in return for which the insurer guarantees to provide the policyholder with an agreed sum, or an annuity, at a given date or earlier.</td><td>Insurance corporations</td></tr>
<tr><td colspan="2">Non-life insurance
Insurance to cover risks like accidents, sickness, fire, credit, etc.</td><td>Insurance corporations</td></tr>
<tr><td>Reinsurance</td><td colspan="2">Insurance bought by an insurer to protect himself against an unexpectedly large number of claims or exceptionally heavy claims.</td><td>Insurance corporations</td></tr>
<tr><td rowspan="4">Social insurance</td><td rowspan="2">Social security
The participants are obliged by general government to insure against certain social risks.</td><td>Social security pensions</td><td rowspan="2">Social security funds</td></tr>
<tr><td>Other social security</td></tr>
<tr><td rowspan="2">Employment related social insurance other than social security
Employers can make it a condition of employment that employees insure against certain social risks.</td><td>Employment related pensions</td><td rowspan="2">Sector of employer, insurance corporations and pension funds or non-profit institutions serving households</td></tr>
<tr><td>Other employment related social insurance</td></tr>
</table>

2.104 Subsector S.128 does not include:

(a) institutional units which fulfil each of the two criteria listed in paragraph 2.117. They are classified in sub-sector S.1314;

(b) head offices which oversee and manage a group consisting predominantly of insurance corporations, but which are not insurance corporations themselves. They are classified in sub-sector S.126;

(c) non-profit institutions recognised as independent legal entities serving insurance corporations, but not engaged in financial intermediation. They are classified in subsector S.126.

Pension funds (S.129)

2.105 *Definition:* the pension funds subsector (S.129) consists of all financial corporations and quasi-corporations which are principally engaged in financial intermediation as the consequence of the pooling of social risks and needs of the insured persons (social insurance). Pension funds as social insurance schemes provide income in retirement, and often benefits for death and disability.

2.106 Subsector S.129 consists of only those social insurance pension funds that are institutional units separate from the units that create them. Such autonomous funds have autonomy of decision and keep a complete set of accounts. Non-autonomous pension funds are not institutional units and remain part of the institutional unit that sets them up.

2.107 Examples of participants in pension fund schemes include employees of a single enterprise or a group of enterprises, employees of a branch or industry, and persons having the same profession. The benefits included in the insurance contract can be:

(a) paid after the death of the insured to the widow(er) and children;

(b) paid after retirement; or

(c) paid after the insured becomes disabled.

2.108 In some countries, all those types of risks can be insured by life insurance corporations as well as through pension funds. In other countries, it is required that some of those classes of risks are insured through life insurance corporations. In contrast to life insurance corporations, pension funds are restricted by law to specified groups of employees and self-employed.

2.109 Pension fund schemes may be organised by employers or by general government. They may also be organised by insurance corporations on behalf of employees; or separate institutional units may be established to hold and manage the assets to be used to meet the pension entitlements and to distribute the pensions.

2.110 Subsector S.129 does not include:

(a) institutional units which fulfil each of the two criteria listed in paragraph 2.117. They are classified in subsector S.1314;

(b) head offices which oversee and manage a group consisting predominantly of pension funds, but which are not pension funds themselves. They are classified in subsector S.126;

(c) non-profit institutions recognised as independent legal entities serving pension funds, but not engaged in financial intermediation. They are classified in subsector S.126.

General government (S.13)

2.111 *Definition:* the general government sector (S.13) consists of institutional units which are non-market producers whose output is intended for individual and collective consumption, and are financed by compulsory payments made by units belonging to other sectors, and institutional units principally engaged in the redistribution of national income and wealth.

2.112 The institutional units included in sector S.13 are for example the following:

(a) general government units which exist through a legal process to have judicial authority over other units in the economic territory, and administer and finance a group of activities, principally providing non-market goods and services, intended for the benefit of the community;

(b) a corporation or quasi-corporation which is a government unit, if its output is mainly non-market and a government unit controls it;

(c) non-profit institutions recognised as independent legal entities which are non-market producers and which are controlled by general government;

(d) autonomous pension funds, where there is a legal obligation to contribute, and where general government manages the funds with respect to the settlement and approval of contributions and benefits.

2.113 The general government sector is divided into four subsectors:

(a) central government (excluding social security funds) (S.1311);

(b) state government (excluding social security funds) (S.1312);

(c) local government (excluding social security funds) (S.1313);

(d) social security funds (S.1314).

Central government (excluding social security funds) (S.1311)

2.114 *Definition:* this subsector includes all administrative departments of the state and other central agencies whose competence extends normally over the whole economic territory, except for the administration of social security funds.

Included in subsector S.1311 are those non-profit institutions which are controlled by central government and whose competence extends over the whole economic territory.

Market regulatory organisations which are either exclusively or principally distributors of subsidies are classified in S.1311. Those organisations which are exclusively or principally engaged in buying, holding and selling agricultural or food products are classified in S.11.

State government (excluding social security funds) (S.1312)

2.115 *Definition:* this subsector consists of those types of public administration which are separate institutional units exercising some of the functions of government, except for the administration of social security funds, at a level below that of central government and above that of the governmental institutional units existing at local level.

Included in subsector S.1312 are those non-profit institutions which are controlled by state governments and whose competence is restricted to the economic territories of the states.

Local government (excluding social security funds) (S.1313)

2.116 *Definition:* this subsector includes those types of public administration whose competence extends to only a local part of the economic territory, apart from local agencies of social security funds.

Included in subsector S.1313 are those non-profit institutions which are controlled by local governments and whose competence is restricted to the economic territories of the local governments.

Social security funds (S.1314)

2.117 *Definition:* the social security funds subsector includes central, state and local institutional units whose principal activity is to provide social benefits and which fulfil each of the following two criteria:

(a) by law or by regulation certain groups of the population are obliged to participate in the scheme or to pay contributions; and

(b) general government is responsible for the management of the institution in respect of the settlement or approval of the contributions and benefits independently from its role as supervisory body or employer.

There is usually no direct link between the amount of the contribution paid by an individual and the risk to which that individual is exposed.

Households (S.14)

2.118 *Definition:* the households sector (S.14) consists of individuals or groups of individuals as consumers and as entrepreneurs producing market goods and non-financial and financial services (market producers) provided that the production of goods and services is not by separate entities treated as quasi-corporations. It also includes individuals or groups of individuals as producers of goods and non-financial services for exclusively own final use.

Households as consumers may be defined as small groups of persons who share the same living accommodation, who pool their income and wealth and who consume certain types of goods and services collectively, mainly housing and food.

The principal resources of households are the following:

(a) the compensation of employees;

(b) property income;

(c) transfers from other sectors;

(d) receipts from the disposal of market products; and

(e) imputed receipts from the output of products for own final consumption.

2.119 The households sector includes:

(a) individuals or groups of individuals whose principal function is consumption;

(b) persons living permanently in institutions who have little or no autonomy of action or decision in economic matters (e.g. members of religious orders living in monasteries, long-term patients in hospitals, prisoners serving long sentences, old persons living permanently in retirement homes). Such people are treated as a single institutional unit: a single household;

(c) individuals or groups of individuals whose principal function is consumption and that produce goods and non-financial services for exclusively own final use; only two categories of services produced for own final consumption are included within the system: services of owner-occupied dwellings and domestic services produced by paid employees;

(d) sole proprietorships and partnerships without legal status, other than those treated as quasi-corporations, and which are market producers; and

(e) non-profit institutions serving households, which do not have independent legal status, or those which do but which are of only minor importance.

2.120 In the ESA 2010, the households sector is subdivided into the following subsectors:

(a) employers (S.141) and own-account workers (S.142);

(b) employees (S.143);

(c) recipients of property income (S.1441);

(d) recipients of pensions (S.1442);

(e) recipients of other transfers (S.1443).

2.121 Households are allocated to subsectors according to the largest income category (employers' income, compensation of employees, etc.) of the household as a whole. When more than one income of a given category is received within the same household, the classification is based on the total household income within each category.

Employers and own-account workers (S.141 and S.142)

2.122 *Definition:* the employers and own-account workers subsector consists of the group of households for which the (mixed) incomes (B.3) accruing to the owners of household unincorporated enterprises from their activity as producers of market goods and services with or without paid employees are the largest source of income for the household as a whole, even if it does not account for more than half of total household income.

Employees (S.143)

2.123 *Definition:* the employees subsector consists of the group of households for which the income accruing from compensation of employees (D.1) is the largest source of income for the household as a whole.

Recipients of property income (S.1441)

2.124 *Definition:* the recipients of property income subsector consists of the group of households for which property income (D.4) is the largest source of income for the household as a whole.

Recipients of pensions (S.1442)

2.125 *Definition:* the recipients of pensions subsector consists of the group of households for which the income accruing from pensions is the largest source of income for the household as a whole.

Pension households are households whose largest source of income consists of retirement or other pensions, including pensions from previous employers.

Recipients of other transfers (S.1443)

2.126 *Definition:* the recipients of other transfers subsector consists of the group of households for which the income accruing from other current transfers is the largest source of income for the household as a whole.

Other current transfers are all current transfers other than property income, pensions and income of persons living permanently in institutions.

2.127 If information on the relative contributions of the sources of income of the household as a whole is not available for sectoring purposes, the income of the reference person is used for classifying purposes. The reference person of a household is the person with the largest income. If the latter information is not available, the income of the person who states that he/she is the reference person is used for subsectoring households.

2.128 Other criteria for subsectoring households can be used, e.g. breakdown of households as entrepreneurs by activity: agricultural households and non-agricultural households.

Non-profit institutions serving households (S.15)

2.129 *Definition:* the non-profit institutions serving households (NPISHs) sector (S.15) consists of non-profit institutions which are separate legal entities, which serve households and which are private non-market producers. Their principal resources are voluntary contributions in cash or in kind from households in their capacity as consumers, from payments made by general government and from property income.

2.130 Where such institutions are not very important, they are not included in the NPISH sector, but in the households sector (S.14), as their transactions are indistinguishable from units in that sector. Non-market NPISHs controlled by general government are classified in the general government sector (S.13).

The NPISHs sector includes the following main kinds of NPISHs that provide non-market goods and services to households:

(a) trade unions, professional or learned societies, consumers' associations, political parties, churches or religious societies (including those financed but not controlled by governments), and social, cultural, recreational and sports clubs; and

(b) charities, relief and aid organisations financed by voluntary transfers in cash or in kind from other institutional units.

Sector S.15 includes charities, relief or aid agencies serving non-resident units and excludes entities where membership gives a right to a predetermined set of goods and services.

Rest of the world (S.2)

2.131 *Definition:* the rest of the world sector (S.2) is a grouping of units without any characteristic functions and resources; it consists of non-resident units insofar as they are engaged in transactions with resident institutional units, or have other economic links with resident units. Its accounts provide an overall view of the economic relationships linking the national economy with the rest of the world. The institutions of the EU and international organisations are included.

2.132 The rest of the world is not a sector for which complete sets of accounts have to be kept, but it is convenient to treat the rest of the world as a sector. Sectors are obtained by disaggregating the total economy to obtain more homogeneous groups of resident institutional units, which are similar in respect to their economic behaviour, objectives and functions. This is not the case for the rest of the world sector: for this sector, there are recorded the transactions and other flows of non-financial and financial corporations, non-profit institutions, households and general government with non-resident institutional units and other economic relationships between residents and non-residents, e.g. claims by residents on non-residents.

2.133 The accounts for the rest of the world include only transactions carried out between resident institutional units and non-resident units, subject to the following exceptions:

(a) the services of transport (up to the border of the exporting country) provided by resident units in respect of imported goods are shown in the rest of the world accounts with FOB imports, even though they are produced by resident units;

(b) transactions in foreign assets between residents belonging to different sectors in the domestic economy are shown in the detailed financial accounts for the rest of the world. These transactions do not affect the country's financial position vis-à-vis the rest of the world; they affect the financial relationships of individual sectors with the rest of the world;

(c) transactions in the country's liabilities between non-residents belonging to different geographical zones are shown in the geographical breakdown of the rest of the world accounts. Although these transactions do not affect the country's overall liability to the rest of the world, they affect its liabilities to different parts of the world.

2.134 The rest of the world sector (S.2) is subdivided into:

(a) Member States and institutions and bodies of the European Union (S.21):

(1) Member States of the European Union (S.211);

(2) Institutions and bodies of the European Union (S.212);

(b) non-member countries and international organisations non-resident of EU (S.22).

Sector classification of producer units for main standard legal forms of ownership

2.135 The following overview and paragraphs 2.31 to 2.44 summarise the principles underlying the classification of producer units into sectors, using the standard terminology for describing the main types of institutions.

2.136 Private and public corporations which are market producers are classified as follows:

(a) those principally engaged in the production of goods and non-financial services: in sector S.11 (non-financial corporations);

(b) those principally engaged in financial intermediation and auxiliary financial activities: in sector S.12 (financial corporations).

2.137 Cooperatives and partnerships which are recognised as independent legal entities and are market producers are classified as follows:

(a) those principally engaged in the production of goods and non-financial services: in sector S.11 (non-financial corporations);

(b) those principally engaged in financial intermediation and auxiliary financial activities: in sector S.12 (financial corporations).

2.138 Public producers which by virtue of special legislation are recognised as independent legal entities and which are market producers are classified as follows:

(a) those principally engaged in the production of goods and non-financial services: in sector S.11 (non-financial corporations);

(b) those principally engaged in financial intermediation and auxiliary financial activities: in sector S.12 (financial corporations).

2.139 Public producers which are not recognised as independent legal entities and are market producers are classified as follows:

(a) If they are quasi-corporations:

(1) those principally engaged in the production of goods and non-financial services: in sector S.11 (non-financial corporations);

(2) those principally engaged in financial intermediation and financial auxiliary activities: in sector S.12 (financial corporations).

(b) If they are not quasi-corporations: in sector S.13 (general government), as they remain an integral part of the units which control them.

2.140 Non-profit institutions (associations and foundations) recognised as independent legal entities are classified as follows:

(a) those which are market producers and principally engaged in the production of goods and non-financial services: in sector S.11 (non-financial corporations);

(b) those principally engaged in financial intermediation and auxiliary financial activities: in sector S.12 (financial corporations);

(c) those which are non-market producers:

(1) in sector S.13 (general government), if they are public producers controlled by general government;

(2) in sector S.15 (non-profit institutions serving households), if they are private producers.

2.141 Sole proprietorships and partnerships which are not recognised as independent legal entities and are market producers are classified as follows:

(a) If they are quasi-corporations:

(1) those principally engaged in the production of goods and non-financial services: in sector S.11 (non-financial corporations);

(2) those principally engaged in financial intermediation and financial auxiliary activities: in sector S.12 (financial corporations).

(b) If they are not quasi-corporations, they are classified in sector S.14 (households).

2.142 Head offices are classified as follows:

(a) in sector S.11 (non-financial corporations), if the preponderant type of activity of the group of corporations which are market producers as a whole is the production of goods and non-financial services (see point (e) of paragraph 2.46);

(b) in sector S.12 (financial corporations), if the preponderant type of activity of the group of corporations as a whole is financial intermediation (see point (e) of paragraph 2.65).

Holding companies which are holders of assets of a group of subsidiary corporations are always treated as financial corporations. Holding companies hold the assets of a group of companies, but do not undertake any management activities with respect to the group.

2.143 Table 2.5 shows in schematic form the various cases enumerated above.

Table 2.5 — Sector classification of producer units for main standard legal forms of ownership

Type of producer Standard legal description		Market producers (goods and non-financial services)	Market producers (financial intermediation)	Non-market producers	
				Public producers	Private producers
Private and public corporations		S.11 non-financial corporations	S.12 financial corporations		
Cooperatives and partnerships recognised as independent legal entities		S.11 non-financial corporations	S.12 financial corporations		
Public producers which by virtue of special legislation are recognised as independent legal entities		S.11 non-financial corporations	S.12 financial corporations		
Public producers not recognised as independent legal entities	Those with the characteristics of quasi-corporations	S.11 non-financial corporations	S.12 financial corporations		
	The rest			S.13 general government	
Non-profit institutions recognised as independent legal entities		S.11 non-financial corporations	S.12 financial corporations	S.13 general government	S.15 non-profit institutions serving households
Partnerships not recognised as independent legal entities Sole proprietorships	Those with the characteristics of quasi-corporations	S.11 non-financial corporations	S.12 financial corporations		
	The rest	S.14 households	S.14 households		
Head offices whose preponderant type of activity of the group of corporations controlled by them is the production of:	goods and non-financial services	S.11 non-financial corporations			
	financial services		S.12 financial corporations		

Local kind-of-activity units and industries

2.144 Most institutional units producing goods and services are engaged in a combination of activities at the same time. They may be engaged in a principal activity, some secondary activities and some ancillary activities.

2.145 An activity occurs when resources such as equipment, labour, manufacturing techniques, information networks or products are combined, leading to the creation of specific goods or services. An activity is characterised by an input of products, a production process and an output of products.

Activities can be determined by reference to a specific level of NACE Rev. 2.

2.146 If a unit carries out more than one activity, all the activities which are not ancillary activities (see Chapter 3, paragraph 3.12) are ranked according to the gross value added. On the basis of the preponderant gross value added generated, a distinction can then be made between principal activity and secondary activities.

2.147 In order to analyse flows occurring in the process of production and in the use of goods and services, it is necessary to choose units which emphasise relationships of a technico-economic kind. This requirement means that institutional units must be partitioned into smaller and more homogeneous units with regard to the kind of production. Local kind-of-activity units are intended to meet this requirement as an operational approach.

The local kind-of-activity unit

2.148 *Definition:* the local kind-of-activity unit (local KAU) is the part of a kind-of-activity unit (KAU) which corresponds to a local unit. The local KAU is called establishment in the 2008 SNA and ISIC Rev. 4. A KAU groups all the parts of an institutional unit in its capacity as producer contributing to the performance of an activity at class level (four digits) of the NACE Rev. 2 and corresponds to one or more operational subdivisions of the institutional unit. The institutional unit's information system must be capable of indicating or calculating for each local KAU at least the value of production, intermediate consumption, compensation of employees, the operating surplus and employment and gross fixed capital formation.

The local unit is an institutional unit, or part of an institutional unit, producing goods or services situated in a geographically identified place.

A local KAU may correspond to an institutional unit as producer; on the other hand, it can never belong to two different institutional units.

2.149 If an institutional unit producing goods or services contains a principal activity and also one or several secondary activities, it is subdivided into the same number of KAUs, and the secondary activities are classified under different headings from the principal activity. The ancillary activities are not separated from the principal or secondary activities. But KAUs falling within a particular heading of the classification system can produce products outside the homogeneous group on account of secondary activities connected with them which cannot be separately identified from available accounting documents. Thus a KAU may carry out one or more secondary activities.

Industries

2.150 *Definition:* an industry consists of a group of local KAUs engaged in the same, or similar, kind-of-activity. At the most detailed level of classification, an industry consists of all the local KAUs falling within a single class (four digits) of NACE Rev. 2 and which are therefore engaged in the same activity as defined in the NACE Rev. 2.

Industries comprise both local KAUs producing market goods and services and local KAUs producing non-market goods and services. An industry by definition consists of a group of local KAUs engaged in the same type of productive activity, irrespective of whether or not the institutional units to which they belong produce market or non-market output.

2.151 Industries are classified in three categories:

(a) industries producing market goods and services (market industries) and goods and services for own final use. Services for own final use are housing services produced by owner-occupiers, and domestic services produced by employing paid staff;

(b) industries producing non-market goods and services of general government: non-market industries of general government;

(c) industries producing non-market goods and services of non-profit institutions serving households: non-market industries of non-profit institutions serving households.

Classification of industries

2.152 The classification used for grouping local KAUs into industries is the NACE Rev. 2.

Units of homogeneous production and homogeneous branches

2.153 For analysis of the production process, the unit best suited to this analysis is the unit of homogeneous production. This unit has a unique activity defined by its inputs, process of production, and outputs.

The unit of homogeneous production

2.154 *Definition:* a unit of homogeneous production carries out a unique activity which is identified by its inputs, process of production, and its outputs. The products which constitute the inputs and outputs are themselves distinguished by their physical characteristics, the extent to which they are processed and the technique of production used. They can be identified by a classification of products (classification of products by activity — CPA). The CPA is a product classification the elements of which are structured according to the industrial origin criterion, industrial origin being defined by NACE Rev. 2.

The homogeneous branch

2.155 *Definition:* the homogeneous branch consists of a grouping of units of homogeneous production. The set of activities covered by a homogeneous branch is identified by reference to a product classification. The homogeneous branch produces those goods or services specified in the classification and only those products.

2.156 Homogeneous branches are units designed for economic analysis. Units of homogeneous production cannot usually be observed directly; data collected from the units used in statistical enquiries have to be re-arranged to form homogeneous branches.

CHAPTER 3

Transactions in products and non-produced assets

Transactions in products in general

3.01 *Definition:* products are all goods and services that are created within the production boundary. Production is defined in paragraph 3.07.

3.02 The following main categories of transactions in products are distinguished in the ESA:

Transaction categories	Code
Output	P.1
Intermediate consumption	P.2
Final consumption expenditure	P.3
Actual final consumption	P.4
Gross capital formation	P.5
Exports of goods and services	P.6
Imports of goods and services	P.7

3.03 Transactions in products are recorded as follows:

(a) in the goods and services account, output and imports are recorded as resources and the other transactions in products are recorded as uses;

(b) in the production account, output is recorded as a resource and intermediate consumption is recorded as a use; gross value added is the balancing item of these two transactions in products;

(c) in the use of disposable income account, final consumption expenditure is recorded as a use;

(d) in the use of adjusted disposable income account, actual final consumption is recorded as a use;

(e) in the capital account, gross capital formation is recorded as a use (a change in non-financial assets);

(f) in the external account of goods and services, imports of goods and services are recorded as a resource, and exports of goods and services are registered as uses.

Many major balancing items in the accounts, like value added, gross domestic product, national income and disposable income, are defined in terms of transactions in products. The definition of transactions in products defines those balancing items.

3.04 In the supply table (see paragraph 1.136), output and imports are recorded as supplies. In the use table, intermediate consumption, gross capital formation, final consumption expenditure and exports are registered as uses. In the symmetric input-output table, output and imports are recorded as supplies and the other transactions in products as uses.

3.05 Supplies of products are valued at basic prices (see paragraph 3.44). Uses of products are valued at purchasers' prices (see paragraph 3.06). For some types of supplies and uses, e.g. for imports and exports of goods, more specific valuation principles are used.

3.06 *Definition:*

The purchaser's price is the price the purchaser pays for the products. The purchaser's price includes the following:

(a) taxes less subsidies on the products (but excluding deductible taxes like VAT on the products);

(b) transport charges paid separately by the purchaser to take delivery at the required time and place;

(c) deductions for any discounts for bulk or off-peak-purchases from standard prices or charges.

The purchaser's price excludes the following:

(a) interest or services charges added under credit arrangements;

(b) extra charges incurred as a result of late payment, where late payment means failing to pay within the period stated at the time the purchases were made.

If the time of use does not coincide with the time of purchase, adjustments are made to the value to take account of the changes in price due to the lapsing of time (in a manner symmetrical with changes in the prices of the inventories). Such modifications are important if the prices of the products involved change significantly within a year.

Production and output

3.07 *Definition:* production is an activity carried out under the control, responsibility and management of an institutional unit that uses inputs of labour, capital and goods and services to produce outputs of goods and services.

Production does not cover natural processes which have no human involvement or direction, such as the unmanaged growth of fish stocks in international waters, but production does include fish farming.

3.08 Production includes:

(a) the production of all individual or collective goods and services that are supplied to units other than their producers;

(b) the own-account production of all goods that are retained by their producers for their own final consumption or gross fixed capital formation.

Examples of own-account production for gross fixed capital formation are the production of fixed assets such as construction, the development of software and mineral exploration for own gross fixed capital formation. The concept of gross fixed capital formation is described in paragraphs 3.124-3.138.

Own-account production of goods by households pertains in general to:

(1) own-account construction of dwellings;

(2) the production and storage of agricultural products;

(3) the processing of agricultural products, like the production of flour by milling, the preservation of fruit by drying and bottling, the production of dairy products like butter and cheese and the production of beer, wine and spirits;

(4) the production of other primary products, like mining salt, cutting peat and carrying water;

(5) other kinds of processing, like weaving cloth, the production of pottery and making furniture;

(c) the own-account production of dwelling services by owner-occupiers;

(d) domestic and personal services produced by employing paid domestic staff;

(e) volunteer activities that result in goods. Examples of such activities are the construction of a dwelling, church or other building. Volunteer activities that do not result in goods, e.g. care-taking and cleaning without payment, are excluded.

The activities listed above in points (a) to (e) are included as production irrespective of being illegal or not-registered at tax, social security, statistical and other public authorities.

Own-account production of goods by households is recorded when this type of production is significant, i.e. when it is quantitatively important in relation to the total supply of that good in a country.

The only own-account production of goods by households included is the construction of dwellings, and the production, storage and processing of agricultural products.

3.09 Production excludes the production of domestic and personal services that are produced and consumed within the same household. Examples of domestic services produced by households themselves that are excluded are:

(a) cleaning, decoration and maintenance of the dwelling as far as these activities are also common for tenants;

(b) cleaning, servicing and repair of household durables;

(c) preparation and serving of meals;

(d) care, training and instruction of children;

(e) care of sick, infirm or old people; and

(f) transportation of members of the household or their goods.

Domestic and personal services produced by employing paid domestic staff and the services of owner-occupied dwellings are included in production.

Principal, secondary and ancillary activities

3.10 *Definition:* the principal activity of a local KAU is the activity where the value added of such activity exceeds that of any other activity carried out within the same unit. The classification of the principal activity is determined by reference to NACE rev. 2, first at the highest level of the classification and then at more detailed levels.

3.11 *Definition:* a secondary activity is an activity carried out within a single local KAU in addition to the principal activity. The output of the secondary activity is a secondary product.

3.12 *Definition:* an ancillary activity is an activity whose output is intended for use within an enterprise.

An ancillary activity is a supporting activity undertaken within an enterprise in order to enable the principal or secondary activities of local KAUs to be carried out. All inputs consumed by an ancillary activity — materials, labour, consumption of fixed capital, etc. — are treated as inputs into the principal or secondary activity which it supports.

Examples of ancillary activities are:

(a) purchasing;

(b) sales;

(c) marketing;

(d) accounting;

(e) data processing;

(f) transportation;

(g) storage;

(h) maintenance;

(i) cleaning; and

(j) security services.

Enterprises have a choice between engaging in ancillary activities and purchasing such services on the market from specialist service producers.

Own-account capital formation is not an ancillary activity.

3.13 Ancillary activities are not isolated to form distinct entities or separated from the principal or secondary activities or entities they serve. Accordingly, ancillary activities must be integrated with the local KAU they serve.

Ancillary activities may be carried out in separate locations, located in a region other than the local KAU they serve. The strict application of the rule referred to in the first subparagraph for the geographical allocation of the ancillary activities would result in the underestimation of the aggregates in the regions where ancillary activities are concentrated. In accordance, therefore, with the principle of residence, ancillary activities have to be allocated to the region where they are situated; they remain in the same industry as the local KAU they serve.

Output (P.1)

3.14 *Definition:* output is the total of products created during the accounting period.

Examples of output include the following:

(a) the goods and services which one local KAU provides to a different local KAU belonging to the same institutional unit;

(b) the goods produced by a local KAU that remain in inventories at the end of the period in which they are produced, whatever their subsequent use. Goods and services produced and consumed within the same accounting period and within the same local KAU are not separately identified. They are not recorded as part of the output or intermediate consumption of that local KAU.

3.15 When an institutional unit contains more than one local KAU, the output of the institutional unit is the sum of the outputs of its component local

KAUs, including outputs delivered between the component local KAUs.

3.16 Three types of output are distinguished in the ESA 2010:

(a) market output (P.11);

(b) output produced for own final use (P.12);

(c) non-market output (P.13).

This distinction is also applied to local KAUs and institutional units:

(a) market producers;

(b) producers for own final use;

(c) non-market producers.

The distinction between market, for own final use and non-market is fundamental in view of the following:

(a) it affects the valuation of output and related concepts, such as value added, gross domestic product and final consumption expenditure by the government and NPISH;

(b) it affects the classification of institutional units by sector, e.g. which units are included in the sector general government and which are not.

The distinction determines the valuation principles to be applied to output. Market output and output produced for own final use are valued at basic prices. The total output of non-market producers is valued by summing the costs of production. The output of an institutional unit is valued as the sum of the outputs of its local KAUs and depends thus also on the distinction between market, for own final use and non-market.

The distinction is also used to classify institutional units by sector. Non-market producers are classified in the general government sector or the non-profit institutions serving households sector.

The distinctions are defined in a top-down way, i.e. the distinction is first defined for institutional units, then for local KAUs and then for their output.

At the product level output is classified as market output, output for own final use and non-market output according to the characteristics of the institutional unit and the local KAU that produce that output.

3.17 *Definition:* market output consists of output that is disposed of on the market or intended to be disposed of on the market.

3.18 Market output includes:

(a) products sold at economically significant prices;

(b) products bartered;

(c) products used for payments in kind (including compensation of employees in kind and mixed income in kind);

(d) products supplied by one local KAU to another within the same institutional unit to be used as intermediate inputs or for final uses;

(e) products added to the inventories of finished goods and work-in-progress intended for one or other of the above uses (including natural growth of animal and vegetable products and uncompleted structures for which the buyer is unknown).

3.19 *Definition:* economically significant prices are prices that have a substantial effect on the amounts of products that producers are willing to supply and on the amounts of products that purchasers wish to acquire. Such prices arise when both of the following conditions apply:

(a) the producer has an incentive to adjust supply either with the goal of making a profit in the long run or, at a minimum, covering capital and other costs; and

(b) consumers have the freedom to purchase or not purchase and make the choice on the basis of the prices charged.

Not economically significant prices are likely to be charged in order to raise some revenue or achieve some reduction in the excess demand that may occur when services are provided completely free.

The economically significant price of a product is defined in relation to the institutional unit and local KAU that has produced the output. For example, all the output of unincorporated enterprises owned by households sold to other institutional units is sold at economically significant prices; it is thus to be regarded as market output. For the output of other institutional units, the ability to undertake a market activity at economically significant prices will be checked notably through a quantitative criterion (the 50 % criterion), using the ratio of sales to production costs. To be a market producer, the unit shall cover at least 50 % of its costs by its sales over a sustained multi-year period.

3.20 *Definition:* output produced for own final use consists of goods or services that are retained either for own final consumption or for capital formation by the same institutional unit.

3.21 Products retained for own final consumption can only be produced by the households sector. Examples of products retained for own final consumption include:

(a) agricultural products retained by farmers;

(b) dwelling services produced by owner-occupiers;

(c) household services produced by employing paid staff.

3.22 Products used for own capital formation can be produced by any sector. Examples of such products are:

(a) machine tools produced by engineering enterprises;

(b) dwellings, or extensions to dwellings, produced by households;

(c) own-account construction, including communal construction undertaken by groups of households;

(d) own-account software;

(e) own-account research and development. Expenditure on research and development is only to be recorded as fixed capital formation when a sufficiently high level of reliability and comparability of the estimates across the Member States has been achieved.

3.23 *Definition:* non-market output is output that is provided to other units for free, or at prices that are not economically significant.

Non-market output (P.13) is subdivided into two items: 'Payments for non-market output' (P.131), which consists of various fees and charges, and 'Non-market output, other' (P.132), which is output provided for free.

Non-market output is produced for the following reasons.

(a) It may be technically impossible to make individuals pay for collective services because their consumption of such services cannot be monitored and controlled. The production of collective services is organised by government units and financed out of funds other than receipts from sales, namely taxation or other government incomes.

(b) Government units and NPISHs may also produce and supply goods or services to individual households for which they could charge but choose not to do so as a matter of social or economic policy. Examples are the provision of education or health services, for free or at prices that are not economically significant.

3.24 *Definition:* market producers are local KAUs or institutional units the majority of output of which is market output.

If a local KAU or institutional unit is a market producer, its main output is by definition market output, as the concept of market output is defined after having applied the distinction market, for own final use and non-market output, to the local KAU and institutional unit that have produced that output.

3.25 *Definition:* producers for own final use are local KAUs or institutional units the major part of the output of which is for own final use within the same institutional unit.

3.26 *Definition:* non-market producers are local KAUs or institutional units the major part of the output of which is provided for free or at not economically significant prices.

Institutional units: distinction between market, for own final use and non-market

3.27 For institutional units as producers, the distinction between market, for own final use and non-market is summarised in Table 3.1. The classification by sectors is also shown.

Table 3.1 — The distinction between market producers, producers for own final use and non-market producers for institutional units

Type of institutional unit				Classification	
Private or public?		**NPI or not?**	**Market producer?**	**Type of producer**	**Sector(s)**
1. Private producers	1.1 Unincorporated enterprises owned by households (excluding quasi-corporate enterprises owned by households)			1.1 = Market or for own final use	Households
	1.2 Other private producers (including quasi-corporate enterprises owned by households)	1.2.1 Private NPIs	1.2.1.1 Yes	1.2.1.1 = Market	Corporations
			1.2.1.2 No	1.2.1.2 = Non-market	NPISH
		1.2.2 Other private producers not NPI		1.2.2 = Market	Corporations
2. Public producers			2.1 Yes	2.1 = Market	Corporations
			2.2 No	2.2 = Non-market	General government

3.28 Table 3.1 shows that, in order to determine whether an institutional unit should be classified as a market producer, a producer for own-final use or a non-market producer, several distinctions are made sequentially. The first distinction is between private and public producers. A public producer is a producer that is controlled by the general government, where control is as defined in paragraph 2.38.

3.29 As Table 3.1 shows, private producers are found in all sectors except general government. In contrast, public producers are only found in the non-financial corporations sector, the financial corporations sector, and the general government sector.

3.30 A specific category of private producers is that of unincorporated enterprises owned by households. These are market producers or producers for own final use. The latter occurs in case of the production of services of owner-occupied dwellings and the own-account production of goods. All unincorporated enterprises owned by households are classified to the households sector apart from quasi-corporate enterprises owned by households. These are market producers and classified in the non-financial corporations and financial corporations sectors.

3.31 For other private producers, a distinction is made between private non-profit institutions and other private producers.

Definition: a private non-profit institution (NPI) is defined as a legal or social entity acting for the purpose of producing goods and services whose status does not permit them to be a source of income, profit or other financial gains for the units that establish, control or finance them. Where their productive activities generate surpluses, such surpluses cannot be appropriated by other institutional units.

A private NPI is classified to the non-financial corporations and financial corporations sectors, if it is a market producer.

A private NPI is classified to the NPISH sector if it is a non-market producer, except when it is under the control of government. When a private NPI is controlled by government, then it is classified in the general government sector.

All other private producers that are not NPIs are market producers. They are classified in the non-financial corporations and financial corporations sectors.

3.32 In distinguishing between market and non-market output and between market and non-market producers, several criteria are to be used. The market-non-market criteria in question (see paragraph 3.19 on the definition of economically significant prices) seek to assess the existence of market circumstances and sufficient market behaviour by the producer. According to the quantitative market-non-market criterion, products sold at economically significant prices should cover at least a majority of the production costs by sales.

3.33 In applying this quantitative market-non-market criterion, sales and production costs are defined as follows.

(a) Sales shall mean the sales excluding taxes on products but including all payments made by general government or the institutions of the Union and granted to any kind of producer in this type of activity, i.e. all payments linked to the volume or value of output are included, but payments to cover an overall deficit or settle debts are excluded.

This definition of sales corresponds to that of output at basic prices except that:

(1) output at basic prices is only defined after it has been decided on whether the output is market or non-market: sales are only used in valuing market output; non-market output is valued at costs;

(2) the payments made by general government to cover an overall deficit of public corporations and quasi-corporations constitute part of other subsidies on products as defined in point (c) of paragraph 4.35. As a consequence, market output at basic prices includes the payments made by general government to cover an overall deficit.

(b) Sales exclude other sources of revenue like holding gains (though they could be a normal and expected part of business revenue), investment grants, other capital transfers (e.g. debt redemption) and the purchase of equity.

(c) For the purpose of this criterion, production costs are equal to the sum of intermediate consumption, compensation of employees, consumption of fixed capital, other taxes on production plus costs of capital. Other subsidies on production are not deducted. To ensure consistency of the concepts 'sales' and 'production costs' when applying the quantitative market-non-market criterion, 'production costs' shall exclude all costs incurred for own-account capital formation. For the sake of simplicity, the costs of capital may in general be approximated by the net actual interest payments. However, for producers of financial services, the interest charge is taken, i.e. a correction is made for financial intermediation services indirectly measured (FISIM).

The quantitative market-non-market criterion is applied by looking over a range of years. Minor fluctuations in the size of sales from one year to another do not require a reclassification of institutional units (and their local KAUs and output).

3.34 Sales may consist of various elements. For example, in the case of health care services provided by a hospital, sales may correspond to:

(a) purchases by employers to be recorded as income in kind paid to their employees and final consumption expenditure by these employees;

(b) purchases by private insurance companies;

(c) purchases by social security funds and general government to be classified as social benefits in kind;

(d) purchases by households without reimbursement (final consumption expenditure).

Only other subsidies on production and gifts (e.g. from charities) received are not treated as sales.

Similarly, as an illustrative example, the sale of transport services by an enterprise may correspond to intermediate consumption by producers, income in kind provided by employers, social benefits in kind provided by the government and purchases by households without reimbursement.

3.35 Private non-profit institutions serving businesses are a special case. They are usually financed by contributions or subscriptions from the group of businesses concerned. The subscriptions are treated not as transfers but as payments for services rendered, i.e. as sales. These NPIs are therefore market producers and are classified in the non-financial corporations or the financial corporations sector.

3.36 In applying the criterion of comparing sales and production costs of private or public NPIs, including in sales, all the payments linked to volume of output may be misleading in some specific cases.

This can be the case, for example, in relation to the financing of private and public schools. Payments by general government can be linked to the number of pupils but be the subject of negotiation with general government. In such a case, those payments are not recorded as sales, although they may have an explicit link with a measure of the volume of output, such as the number of pupils. This implies that a school mainly financed by such payments is a non-market producer.

3.37 Public producers can be market producers or non-market producers. Market producers are classified in the non-financial and financial corporations sectors. If the institutional unit is a non-market producer, it is classified in the general government sector.

3.38 Local KAUs as market producers and as producers for own final use cannot supply non-market output. Their output can thus only be recorded as market output or output for own final use and valued correspondingly (see paragraphs 3.42 to 3.53).

3.39 Local KAUs as non-market producers can supply as secondary output market outputs and output for own final use. The output for own final use consists of own-account capital formation. The occurrence of market output should in principle be determined by applying the qualitative and quantitative market-non-market criteria to individual products. Such secondary market output by non-market producers might be the case for instance when government hospitals charge economically significant prices for some of their services.

3.40 Other examples are sales of reproductions by government museums and sales of weather forecasts by meteorological institutes.

3.41 Non-market producers may also have revenues from the sale of their non-market output at not economically significant prices, e.g. the museum's revenues from tickets for entrance. These revenues pertain to non-market output. However, if both types of revenues (revenues from tickets and those from the sale of posters and cards) are difficult to distinguish, they can all be treated as either revenues for market output or revenues from non-market output. The choice between these two alternative registrations should depend on the assumed relative importance of both types of revenues (from tickets versus those from the sale of posters and cards).

Time of recording and valuation of output

3.42 Output is to be recorded and valued when it is generated by the production process.

3.43 All output is to be valued at basic prices, but specific conventions hold for:

(a) the valuation of non-market output;

(b) the valuation of total output of a non-market producer (local KAU);

(c) the valuation of the total output of an institutional unit of which a local KAU is a non-market producer.

3.44 *Definition:* the basic price is the price receivable by the producers from the purchaser for a unit of a good or service produced as output minus any tax (i.e. taxes on products) payable on that unit as a consequence of its production or sale, plus any subsidy (i.e. subsidies on products) receivable on that unit as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer. It also excludes holding gains and losses on financial and non-financial assets.

3.45 Output for own final use (P.12) is valued at the basic prices of similar products sold on the market. This generates net operating surplus or mixed income for such output. An example is services of owner-occupied dwellings generating net operating surplus. If basic prices of similar products are not available, output for own final use should be valued at the costs of production plus a mark-up (except for non-market producers) for net operating surplus or mixed income.

3.46 Additions to work-in-progress are valued at the current basic price of the finished product.

3.47 In order to estimate in advance the value of output treated as work-in-progress, the value is based on the actual costs incurred, plus a mark-up (except for non-market producers) for the estimated operating surplus or mixed income. The provisional estimates are subsequently replaced by those obtained by distributing the actual value (once known) of the finished products, over the period of work-in-progress.

The value of the output of finished products is the sum of the values of:

(a) finished products sold or bartered;

(b) entries of finished products into inventories, less withdrawals;

(c) finished products for own final use.

3.48 For buildings and structures acquired in an incomplete state, a value is estimated based on costs to date, including a mark-up for operating surplus or mixed income. This mark-up results when the value can be estimated on the basis of the prices of similar buildings and structures. The amounts of stage payments may be used to approximate the values of gross fixed capital formation undertaken by the purchaser at each stage, assuming no advance payments or arrears.

Where the own-account construction of a structure is not completed within a single accounting period, the value of the output is estimated by the following method. The ratio of the costs incurred in the current period to the total costs over the whole time of construction is calculated. This ratio is applied to the estimate of total output at the current basic price. If it is not possible to estimate the value of the finished structure at current basic price, it is valued by its total costs of production plus a mark-up (except for non-market producers) for net operating surplus or mixed income. If some or all of the labour is provided free, as may happen with communal construction by households, an estimate of what the cost of paid labour would have been is included in the estimated total production costs using wage rates for similar labour inputs.

3.49 The total output of a non-market producer (a local KAU) is valued at the total costs of production, i.e. the sum of:

(a) intermediate consumption (P.2);

(b) compensation of employees (D.1);

(c) consumption of fixed capital (P.51c);

(d) other taxes on production (D.29) less other subsidies on production (D.39).

Interest payments (excluding FISIM) are not included as costs of non-market production. The costs of non-market production also do not include an imputation for a net return on capital, nor an imputation for the rental value of the non-residential buildings owned and used in non-market production.

3.50 The total output of an institutional unit is the sum of the total output of its constituent local KAUs. This applies also to institutional units that are non-market producers.

3.51 In the absence of secondary market output by non-market producers, non-market output is valued at the costs of production. In the case of secondary market output by non-market producers, non-market output is valued as a residual item, i.e. as the total costs of production minus their revenues from market output.

3.52 Market output by non-market producers is valued at basic prices. Total output of a non-market local KAU covering market, non-market and own final use output is valued by the sum of production costs. The value of its market output is given by its receipts from sales of market products, the value of its non-market output being obtained residually as the difference between the value of its total output and the sum of its market output and output for own final use. The value of its receipts from the sale of non-market goods or services at prices that are not economically significant does not figure in these calculations — they are part of the value of its non-market output.

3.53 A list of exceptions and clarifications to the times of recording and the valuation of output follows, in the order of CPA sections.

Products of agriculture, forestry and fishing (Section A)

3.54 The output of agricultural products is recorded as being produced continuously over the entire period of production (and not only when the crops are harvested or animals slaughtered).

Growing crops, standing timber and stocks of fish or animals reared for purposes of food are treated as inventories of work-in-progress during the process, and transformed into inventories of finished products when the process is completed.

Output excludes any changes in uncultivated biological resources, e.g. growth of animals, birds, fish living in the wild or uncultivated growth of forests.

Manufactured products (Section C); construction work (Section F)

3.55 In the case of the construction of a building or other structure extending over several accounting periods, the output produced each period is treated as being sold to the purchaser at the end of the period, i.e. recorded as fixed capital formation by the purchaser rather than work-in-progress in the construction industry. The output is treated as being sold to the purchaser in stages. When the contract calls for stage payments, the value of the output may be approximated by the value of stage payments made each period. Where there is no certainty as to the ultimate purchaser, the incomplete output produced each period is recorded as work-in-progress.

Wholesale and retail trade services; repair services of motor vehicles and motorcycles (Section G)

3.56 The output of wholesale and retail services is measured by the trade margins realised on the goods they purchase for resale.

Definition: a trade margin is the difference between the actual or imputed sale price realised on a good purchased for resale, and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of.

Trade margins realised on some goods can be negative if their sale prices are marked down. Trade margins are negative on goods that are not sold, but instead go to waste or are stolen. Trade margins on goods given to employees as compensation in kind, or withdrawn for final consumption by owners, are equal to zero.

Holding gains and losses are not included in the trade margin.

The output of a wholesaler or retailer is given by the following identity:

the value of output =

the value of sales

plus the value of goods purchased for resale and used for intermediate consumption, compensation of employees in kind or mixed income in kind,

minus the value of goods purchased for resale,

plus the value of additions to inventories of goods for resale,

minus the value of goods withdrawn from inventories of goods for resale,

minus the value of recurrent losses due to normal rates of wastage, theft or accidental damage.

Transportation and storage (Section H)

3.57 The output of transport services is measured by the value of the amounts receivable for transporting goods or persons. Transportation for own use within the local KAU is considered ancillary activity and is not separately identified and recorded.

3.58 The output of storage services is measured as the value of an addition to work-in-progress. Increases in the price of goods while in inventories should not be regarded as work-in-progress and production, but be treated as holding gains. If the increase in value reflects a rise in price with no change in quality, then there is no further production during the period in addition to the costs of storage or the explicit purchase for a storage service. However, in three cases the increase in value is regarded as production:

(a) the quality of the good may improve with the passage of time, e.g. in case of wine; only in cases where maturing is part of the regular production process, the increase of the quality of the good is regarded as production;

(b) seasonal factors affecting the supply or demand for a specific good that lead to regular, predictable variations in price over the year, even though its physical qualities may not have changed;

(c) the production process is sufficiently long that discounting factors are applied to work carried out significantly long before delivery.

3.59 Most changes in prices of goods while in inventories are not additions to work-in-progress. In order to estimate the increase in the value of goods stored over and above the storage costs, use may be made of the expected increase in value over and above the general rate of inflation over a predetermined period. Any gain that occurs outside the predetermined period continues to be recorded as a holding gain or loss.

Storage services do not include any change in price due to holding financial assets, valuables or other non-financial assets like land and buildings.

3.60 The output of travel agency services is measured as the value of service charges of agencies (fees or commission charges) and not by the full expenditures made by travellers to the travel agency, including charges for transport by third parties.

3.61 The output of tour operator services is measured by the full expenditure made by travellers to the tour operator.

3.62 Travel agency services and tour operator services are distinguished by the fact that travel agency services amount only to intermediation on behalf of the traveller, while tour operator services create a new product called a tour, which has various components of travel, accommodation and entertainment.

Accommodation and food services (Section I)

3.63 The value of the output of the services of hotels, restaurants and cafes includes the value of the food, beverages, etc. consumed.

Financial and insurance services (Section K): output of the central bank

The central bank delivers the following services:

(a) monetary policy services;

(b) financial intermediation services;

(c) supervisory services overseeing financial corporations.

The output of the central bank is measured as the sum of its costs.

Financial and insurance services (Section K): financial services in general

Financial services consist of the following services:

(a) financial intermediation (including insurance and pension services);

(b) services of financial auxiliaries; and

(c) other financial services.

3.64 Financial intermediation is financial risk management and liquidity transformation. Corporations engaged in these activities obtain funds for example by taking deposits, and issuing bills, bonds and other securities. The corporations use these funds as well as own funds to acquire financial assets by making loans to others and by purchasing bills, bonds or other securities. Financial intermediation includes insurance and pension services.

3.65 Auxiliary financial activities facilitate risk management and liquidity transformation. Financial auxiliaries act on behalf of other units and do not put themselves at risk by incurring financial liabilities or by acquiring financial assets as part of an intermediation service.

3.66 Other financial services include monitoring services such as monitoring the stock and bond market, security services such as safeguarding expensive jewellery and important documents, and trading services such as foreign exchange dealing and dealing in securities.

3.67 Financial services are produced almost exclusively by financial institutions because of the stringent supervision of those services. For example, if a retailer wishes to offer credit facilities to its customers, the credit facilities are usually offered by a financial corporation subsidiary of the retailer or by another specialised financial institution.

3.68 Financial services may be paid for directly or indirectly. Some transactions in financial assets may involve both direct charges and indirect charges. Financial services are provided and charged for in four main ways:

(a) financial services provided for direct payment;

(b) financial services paid for through loading interest charges;

(c) financial services in acquiring and disposing of financial assets and liabilities in financial markets;

(d) financial services provided in insurance and pension schemes, where the activity is financed by loading insurance contributions and from the income return on savings.

Financial services provided for direct payment

3.69 These financial services are provided for explicit charges, covering a wide range of services that may be provided by different types of financial institutions. The following examples illustrate the nature of the services charged for directly:

(a) banks charge households to arrange a mortgage, manage an investment portfolio, and administer an estate;

(b) specialised institutions charge non-financial corporations for organising a takeover or for administering a restructuring of a group of corporations;

(c) credit card companies charge units that accept credit cards usually a percentage of each sale;

(d) a card holder is charged an explicit fee, usually each year, for holding the card.

Financial services paid for through loading interest charges

3.70 For example, in financial intermediation, a financial institution like a bank accepts deposits from units wishing to receive interest on funds for which the unit has no immediate use and lends them to other units whose funds are insufficient to meet their needs. The bank thus provides a mechanism to allow the first unit to lend to the second. Each of the two parties pays a fee to the bank for the service provided: the unit lending funds pays by accepting a rate of interest lower than the 'reference' rate of interest, while the unit borrowing funds pays by accepting a rate of interest higher than the 'reference' rate of interest. The difference between the interest rate paid to banks by borrowers and the interest rate actually paid to depositors is a charge for FISIM.

3.71 It is seldom the case that the amount of funds lent by a financial institution exactly matches the amount deposited with them. Some money may have been deposited but not yet loaned. Some loans may be financed by the bank's own funds and not from borrowed funds. Irrespective of the source of finance, a service is provided for the loans and deposits offered. FISIM are imputed for all loans and deposits. These indirect charges apply only to loans and deposits provided by, or deposited with, financial institutions.

3.72 The reference rate lies between bank interest rates on deposits and loans. It does not correspond to an arithmetic average of the rates on loans or deposits. The rate prevailing for inter-bank borrowing and lending is a suitable choice. However, different reference rates are needed for each currency in which loans and deposits are denominated, especially when a non-resident financial institution is involved.

FISIM are described in detail in Chapter 14.

Financial services consisting of acquiring and disposing of financial assets and liabilities in financial markets

3.73 When a financial institution offers a security (e.g. bill or bond) for sale, a service charge is levied. The purchase price (the ask price) is equal to the estimated market value of the security plus a margin. Another charge is levied when a security is sold, the price offered to the seller (the bid price) being equal to the market value minus a margin. Margins between buying and selling prices apply also to equities, investment fund shares and foreign currencies. These margins are for the provision of financial services.

Financial services provided in insurance and pension schemes, where activity is financed by loading insurance contributions and from the income return on savings

3.74 The following financial services fall under this heading. Each of them results in a redistribution of funds.

(a) Non-life insurance. Under a non-life insurance policy, the insurance company accepts a premium from a client and holds it until a claim is made or the period of the insurance expires. The insurance company invests the premium and the resulting property income is an extra source of funds. The property income represents income foregone by the client and is treated as an implicit supplement to the actual premium. The insurance company sets the level of the actual premiums to be such that the sum of the premiums plus the property income earned on them less the expected claims will leave a margin that the insurance company will retain as the output of the insurance company.

Non-life insurance output is calculated as:

total premiums earned

plus implicit premium supplements (equal to the property income earned on technical reserves)

less adjusted claims incurred.

The insurance corporation has at its disposal reserves consisting of unearned premiums (actual premiums relating to the next accounting period) and claims outstanding. Claims outstanding cover claims that have not yet been reported, have been reported but are not yet settled or have been reported and settled but are not yet paid. These reserves are called technical reserves and are used to generate investment income. Holding gains and losses are not income from investment of the insurance technical reserves. Insurance technical reserves may be invested in secondary activities of the insurance company, e.g. the letting of dwellings or offices. The net operating surplus on these secondary activities is income from the investment of insurance technical reserves.

The appropriate level of claims used in calculating output is called 'adjusted claims' and these can be determined in two ways. The expectation method estimates the level of adjusted claims from a model based on the past pattern of claims payable by the corporation. The second method uses accounting information: adjusted claims are derived *ex post* as actual claims incurred plus the change in equalisation provisions, i.e. the funds set aside to meet unexpectedly large claims. Where the equalisation provisions are insufficient to bring adjusted claims back to a normal level, contributions from own funds are added to the measure of adjusted claims. A major feature of both methods is that unexpectedly large claims do not lead to volatile and negative estimates of output.

Changes in technical reserves and equalisation provisions in response to changes in financial regulation are recorded as other changes in the volume of assets; they are irrelevant for calculating output. If, due to lack of information, both methods for estimating adjusted claims are not possible, it may be necessary to estimate output instead by the sum of costs including an allowance for normal profits.

In case of with-profits insurance, the change in the reserves for with-profits insurance is deducted to obtain output.

(b) A life insurance policy is a type of saving scheme. For a number of years, the policyholder pays premiums to the insurance corporation against a promise of benefits at some future date. These benefits may be expressed in terms of a formula related to the premiums paid or may be dependent on the level of success the insurance corporation has in investing the funds. The method of calculating output for life insurance follows the same general principles as for non-life insurance. However, because of the time intervals between the time when premiums are received and when benefits are paid, special allowances must be made for changes in the technical reserves. The output of life insurance is derived as:

premiums earned

plus premium supplements, *less* benefits due

less increases (plus decreases) in life insurance technical reserves.

Premiums are defined in exactly the same way for life insurance as for non-life insurance. Premium supplements are more significant for life insurance than for non-life insurance. Benefits are recorded as they are awarded or paid. There is no need under life insurance to derive an adjusted estimate of benefits since there is not the same unexpected volatility in the payment under a life policy. Life insurance technical reserves increase each year because of new premiums paid and new investment income allocated to the policyholders (but not withdrawn by them) and decrease because of benefits paid. It is thus possible to express the level of output of life insurance as the difference between the total investment income earned on the life insurance technical reserves less the part of this investment income actually allocated to the policy holders and added to the insurance technical reserves.

When this method is not feasible for data reasons or does not yield meaningful results, output of life insurance shall also be calculated as the sum of production costs plus an allowance for 'normal profit'.

(c) The output of reinsurance is to be determined in exactly the same way as for non-life insurance, whether it is life or non-life policies that are being reinsured.

(d) The output of running a social insurance scheme depends on the way in which it is organised. The following are examples of how such schemes are organised.

(1) Social security schemes are social insurance schemes that cover the community at large, and are imposed and controlled by government. Their purpose is to provide benefits for citizens to meet the demands of old age, invalidity or death, sickness, work injury, unemployment, family and health care, etc. If separate units are distinguished, their output is determined in the same way as all non-market output as the sum of costs. If separate units are not distinguished, the output of social security is included with the output of the level of government at which it operates.

(2) When an employer operates his own social insurance scheme, the value of the output is determined as the sum of costs including an estimate for a return to any fixed capital used in the operation of the scheme. The value of output is measured in the same way where the employer establishes a separate pension fund to manage the scheme.

(3) Where an employer uses an insurance corporation to manage the scheme on his behalf, the value of the output is the fee charged by the insurance corporation.

(4) For a multi-employer scheme, the value of output is measured as for life insurance policies: it is investment income received by the schemes less the amount added to reserves.

(e) Measuring the output of standardised loan guarantee schemes depends on the type of producer involved. If a standardised loan guarantee scheme operates as a market producer, the value of output is calculated in the same way as non-life insurance. If the scheme operates as a non-market producer, the value of output is calculated as the sum of costs.

Real estate services (Section L)

3.75 The output of services of owner-occupied dwellings is valued at the estimated value of rental that a tenant would pay for the same accommodation, taking into account factors such as location, neighbourhood amenities, etc., as well as the size and quality of the dwelling itself. For garages located separately from dwellings, which are used by the owner for final consumption purposes in connection with using the dwelling, a similar imputation is to be made. The rental value of owner-occupied dwellings abroad, e.g. holiday homes, should not be recorded as part of domestic production, but as imports of services and the corresponding net operating surplus as primary income received from the rest of the world. For owner-occupied dwellings owned by non-residents, analogous entries are made. In case of time-sharing apartments, a proportion of the service charge is recorded.

3.76 To estimate the value of owner-occupied dwelling services, the stratification method is used. The stock of dwellings is stratified by location, nature of dwelling and other factors that affect the rental. Information about actual rentals from rented dwellings is used to obtain an estimate of the rental value of the total stock of dwellings. The average actual rental per stratum is applied to all dwellings in that particular stratum. If the information on rentals is derived from sample surveys, the grossing-up to total stock rentals relates to both a part of the rented and all owner-occupied dwellings. The detailed procedure to determine a rental per stratum is carried out for a base year and is then extrapolated to the later periods.

3.77 The rental to be applied to owner-occupied dwellings in the stratification method is defined as the private market rental due for the right to use an unfurnished dwelling. The rentals for unfurnished dwellings from all private market contracts are used to determine imputed rentals. Private market rentals that are at a low level due to government regulation are included. If the information source is the tenant, the observed rental is corrected by adding any specific rental allowance, which is paid directly to the landlord. If the sample size for the observed rentals as defined above is not large enough, observed rentals for furnished dwellings may be used for imputation purposes, provided they are adjusted for the furniture element. Exceptionally, also increased rentals for public-owned dwellings may be used. Low rentals for dwellings let to relatives or to employees should not be used.

3.78 The stratification method is used for grossing up to all rented dwellings. The average rental for imputation as described above may not be suitable for some segments of the rental market. For example, scaled-down rentals for furnished dwellings or increased public rentals are not appropriate for the respective actually rented dwellings. In this case, separate strata for actually rented furnished or social dwellings combined with appropriate average rentals are required.

3.79 In the absence of a sufficiently large rental market, where accommodation is characteristic of owner-occupied dwellings, the user-cost method is applied for owner-occupied dwellings.

Under the user-cost method, the output of dwelling services is the sum of intermediate consumption, consumption of fixed capital, other taxes less subsidies on production and net operating surplus (NOS).

The NOS is measured by applying a constant real annual rate of return to the net value of the stock of owner-occupied dwellings at current prices (replacement costs).

3.80 The output of real estate services of non-residential buildings is measured by the value of the rentals due.

Professional, scientific and technical services (Section M); Administrative and support services (Section N)

3.81 The output of operating leasing services, such as renting out machinery or equipments, is measured by the value of the rental paid. Operating leasing is different from financial leasing: financial leasing is financing the acquisition of fixed assets, by making a loan from the lessor to the lessee. Financial leasing payments consist of repayments of principal and interest payments, with a small charge for direct services provided (see Chapter 15: Contracts, leases and licences).

3.82 Research and development (R&D) is creative work undertaken on a systematic basis to increase the stock of knowledge, and use of this stock of knowledge for the purpose of discovering or developing new products, including improved versions or qualities of -existing products, or discovering or developing new or more efficient processes of production. R&D of a significant size relative to the principal activity is recorded as a secondary activity of the local KAU. A separate local KAU is distinguished for R&D where possible.

3.83 The output of R&D services is measured as follows:

(a) R&D by specialised commercial research laboratories or institutes is valued at the revenues from sales, contracts, commissions, fees, etc. in the usual way;

(b) the output of R&D for use within the same enterprise is valued on the basis of the estimated basic prices that would be paid if the research were subcontracted. In the absence of a market for subcontracting R&D of a similar nature, it is valued as the sum of production costs plus a mark-up (except for non-market producers) for NOS or mixed income;

(c) R&D by government units, universities and non-profit research institutes is valued as the sum of the costs of production. Revenues from the sale of R&D by non-market producers of R&D are to be recorded as revenues from secondary market output.

Expenditure on R&D is distinguished from that on education and training. Expenditure on R&D does not include the costs of developing software as a principal or secondary activity.

Public administration and defence services, compulsory social security services (Section O)

3.84 Public administration, defence services and compulsory social security services are provided as non-market services and valued accordingly.

Education services (Section P); human health and social work services (Section Q)

3.85 For education services and health services, a precise distinction is drawn between market and non-market producers and between their market and non-market output. For example, for some types of education and medical treatment, nominal fees can be levied by government institutions (or by other institutions due to specific subsidies), but for other education and special medical treatments they may charge commercial tariffs. Another example is that the same type of service (e.g. higher education) is provided by, on the one hand, the government and, on the other hand, commercial institutes.

Education and health services exclude R&D activities; health services exclude education in health care, e.g. by academic hospitals.

Arts, entertainment and recreation services (Section R); other services (Section S)

3.86 The production of books, recordings, films, software, tapes, disks, etc. is a two-stage process and is measured accordingly:

(1) the output from the production of originals — an intellectual property product — is measured by the price paid if sold, or, if not sold, by the basic price paid for similar originals, its production costs (including a mark-up for NOS) or the discounted value of the future receipts expected from using it in production;

(2) the owner of this asset may use it directly or to produce copies in subsequent periods. If the owner has licensed other producers to make use of the original in production, the fees, commissions, royalties, etc. received from the licenses are the output of services. However, the sale of the original is negative fixed capital formation.

Private households as employers (Section T)

3.87 The output of household services produced by employing paid staff is valued by the compensation of employees paid; this includes any compensation in kind such as food or accommodation.

Intermediate consumption (P.2)

3.88 *Definition:* intermediate consumption consists of goods and services consumed as inputs by a process of production, excluding fixed assets whose consumption is recorded as consumption of fixed capital. The goods and services are either transformed or used up by the production process.

3.89 Intermediate consumption includes the following cases:

(a) goods and services used as inputs into ancillary activities. Common examples are purchasing, sales, marketing, accounting, data processing, transportation, storage, maintenance, security, etc. These goods and services are not distinguished from those consumed by the principal (or secondary) activities of a local KAU;

(b) goods and services which are received from another local KAU of the same institutional unit;

(c) rental of fixed assets, e.g. the operational leasing of machines, cars, software and entertainment originals;

(d) fees for short-term contracts, leases and licences recorded as non-produced assets; this excludes the outright purchase of such non-produced assets;

(e) the subscriptions, contributions or dues paid to non-profit business associations (see paragraph 3.35);

(f) items not treated as gross capital formation, such as:

(1) inexpensive tools used for common operations, such as saws, spades, knives, axes, hammers, screwdrivers, spanners, wrenches and other hand tools; small devices such as pocket calculators. All expenditure on such durables is recorded as intermediate consumption;

(2) the regular maintenance and repair of fixed assets used in production;

(3) services of staff training, market research and similar activities, purchased from an outside agency or provided by a separate local KAU of the same institutional unit;

(4) expenditure on R&D will be treated as fixed capital formation when a sufficiently high level of reliability and comparability of the estimates by the Member States has been achieved;

(g) expenditure by employees, reimbursed by the employer, on items necessary for the employers' production, like contractual obligations to purchase on own-account tools or safety-wear;

(h) expenditure by employers which is to their own benefit as well as to that of their employees, because it is necessary for production. Examples are:

(1) reimbursement of employees for travelling, separation, removal and entertainment expenses incurred in the course of their duties;

(2) providing amenities at the place of work.

A list of relevant expenditure is presented in the paragraphs on compensation of employees (D.1) (see paragraph 4.07);

(i) non-life insurance service charges paid by local KAUs (see Chapter 16: Insurance). To record only the service charge as intermediate consumption, the premiums paid are discounted for, e.g. claims paid out and the net change in actuarial reserves. The net change in actuarial reserves shall be allocated to the local KAUs as a proportion of the premiums paid;

(j) FISIM purchased by resident producers;

(k) the non-market output of the central bank output should be entirely allocated to the intermediate consumption of other financial intermediaries.

3.90 Intermediate consumption excludes:

(a) items treated as gross capital formation, examples being:

(1) valuables;

(2) mineral exploration;

(3) major improvements beyond those required to keep the fixed assets in good working order. Examples are renovation, reconstruction or enlargement;

(4) software purchased outright or produced on own-account;

(5) military weapons and the equipment to deliver them;

(b) expenditure treated as the purchase of non-produced assets. Examples are long-term contracts, leases and licences (see Chapter 15);

(c) expenditure by employers treated as wages and salaries in kind;

(d) use by market or own-account producer units of collective services provided by government units (treated as collective consumption expenditure by government);

(e) goods and services produced and consumed within the same accounting period and within the same local KAU (they are also not recorded as output);

(f) payments for government licenses and fees that are treated as other taxes on production;

(g) payments for licences for using natural resources (e.g. land) that are treated as rents, i.e. as a payment of property income.

Time of recording and valuation of intermediate consumption

3.91 Products used for intermediate consumption are recorded and valued at the time they enter the process of production. They are valued at the purchasers' prices for similar goods or services at the time of use.

3.92 Producer units do not record the use of goods in production directly. They record the purchases intended to be used as inputs less the increase in the amounts of such goods held in inventory.

Final consumption (P.3, P.4)

3.93 Two concepts of final consumption are used:

(a) final consumption expenditure (P.3);

(b) actual final consumption (P.4).

Final consumption expenditure is expenditure on goods and services used by households, NPISHs and government to satisfy individual and collective needs. In contrast, actual final consumption refers to its acquisition of consumption goods and services. The difference between these concepts lies in the treatment of certain goods and services financed by the government or NPISHs but supplied to households as social transfers in kind.

Final consumption expenditure (P.3)

3.94 *Definition:* final consumption expenditure consists of expenditure incurred by resident institutional units on goods or services that are used for the direct satisfaction of individual needs or wants or the collective needs of members of the community.

3.95 Household final consumption expenditure includes the following examples:

(a) services of owner-occupied dwellings;

(b) income in kind, such as:

(1) goods and services received as income in kind by employees;

(2) goods or services produced as outputs of unincorporated enterprises owned by households that are retained for consumption by members of the household. Examples are food and other agricultural goods, housing services by owner-occupiers and household services produced by employing paid staff (servants, cooks, gardeners, chauffeurs, etc.);

(c) items not treated as intermediate consumption, such as:

(1) materials for small repairs to and interior decoration of dwellings of a kind carried out by tenants as well as owners;

(2) materials for repairs and maintenance to consumer durables, including vehicles;

(d) items not treated as capital formation, in particular consumer durables, that continue to perform their function in several accounting periods; this includes the transfer of ownership of some durables from an enterprise to a household;

(e) financial services directly charged and the part of FISIM used for final consumption purposes by households;

(f) insurance services by the amount of the implicit service charge;

(g) pension funding services by the amount of the implicit service charge;

(h) payments by households for licences, permits, etc. which are regarded as purchases of services (see paragraphs 4.79 and 4.80);

(i) the purchase of output at not economically significant prices, e.g. entrance fees for a museum.

3.96 Household final consumption expenditure excludes the following:

(a) social transfers in kind, such as expenditures initially incurred by households but subsequently reimbursed by social security, e.g. some medical expenses;

(b) items treated as intermediate consumption or gross capital formation, such as:

(1) expenditures by households owning unincorporated enterprises when incurred for business purposes — e.g. on durable goods such as vehicles, furniture or electrical equipment (gross fixed capital formation), and also on non-durables such as fuel (treated as intermediate consumption);

(2) expenditure that an owner-occupier incurs on the decoration, maintenance and repair of the dwelling not typically carried out by tenants (treated as intermediate consumption in producing housing services);

(3) the purchase of dwellings (treated as gross fixed capital formation);

(4) expenditure on valuables (treated as gross capital formation);

(c) items treated as acquisitions of non-produced assets, in particular the purchase of land;

(d) all those payments by households which are to be regarded as taxes (see paragraphs 4.79 and 4.80);

(e) subscriptions, contributions and dues paid by households to NPISHs, such as trade unions, professional societies, consumers' associations, churches and social, cultural, recreational and sports clubs;

(f) voluntary transfers in cash or in kind by households to charities and relief and aid organisations.

3.97 Final consumption expenditure of NPISHs includes two separate categories:

(a) the value of the goods and services produced by NPISHs other than own-account capital formation and other than expenditure made by households and other units;

(b) expenditures by NPISHs on goods or services produced by market producers that are supplied — without any transformation — to households for their consumption as social transfers in kind.

3.98 Final consumption expenditure (P.3) by government includes two categories of expenditures, similar to those by NPISHs:

(a) the value of the goods and services produced by general government itself (P.1) other than own-account capital formation (corresponding to P.12), market output (P.11) and payments for non-market output (P.131);

(b) purchases by general government of goods and services produced by market producers that are supplied to households, without any transformation, as social transfers in kind (D.632). General government pays for these goods and services that the sellers provide to households.

3.99 Corporations do not make final consumption expenditures. Their purchases of goods and services as used by households for final consumption are either used for intermediate consumption or provided to employees as compensation of employees in kind, i.e. imputed household final consumption expenditure.

Actual final consumption (P.4)

3.100 *Definition:* actual final consumption consists of the goods or services that are acquired by resident institutional units for the direct satisfaction of human needs, whether individual or collective.

3.101 *Definition:* goods and services for individual consumption ('individual goods and services') are goods and services acquired by a household and used to satisfy the needs and wants of members of that household. Individual goods and services have the following characteristics:

(a) it is possible to observe and record the acquisition of the goods and services by an individual household or member thereof and also the time at which the acquisition took place;

(b) the household has agreed to the provision of the goods and services and takes the action necessary to consume the goods and services, for example by attending a school or clinic;

(c) the goods and services are such that their acquisition by one household or person, or by a group of persons, precludes its acquisition by other households or persons.

3.102 *Definition:* collective services are services for collective consumption that are provided simultaneously to all members of the community or all members of a particular section of the community, such as all households living in a particular region. Collective services have the following characteristics:

(a) they can be delivered simultaneously to every member of the community or to particular sections of the community, such as those in a particular region or locality;

(b) the use of such services is usually passive and does not require the agreement or active participation of all the individuals concerned;

(c) the provision of a collective service to one individual does not reduce the amount available to other in the same community or section of the community.

3.103 All household final consumption expenditure is individual. All goods and services provided by NPISHs are treated as individual.

3.104 For the goods and services provided by government units, the borderline between individual and collective goods and services is drawn on the basis of the classification of the functions of government (COFOG).

All government final consumption expenditure under each of the following headings is treated as expenditure on individual consumption:

(a) 7.1 Medical products, appliances and equipment
7.2 Outpatient services
7.3 Hospital services
7.4 Public health services;

(b) 8.1 Recreational and sporting services

8.2 Cultural services;

(c) 9.1 Pre-primary and primary education

9.2 Secondary education

9.3 Post-secondary non-tertiary education

9.4 Tertiary education

9.5 Education not definable by level

9.6 Subsidiary services to education;

(d) 10.1 Sickness and disability

10.2 Old age

10.3 Survivors

10.4 Family and children

10.5 Unemployment

10.6 Housing

10.7 Social exclusion not elsewhere included.

3.105 Alternatively individual consumption expenditure of general government corresponds to division 14 of the classification of individual consumption by purpose (Coicop), which includes the following groups:

14.1 Housing (equivalent to COFOG group 10.6)

14.2 Health (equivalent to COFOG groups 7.1 to 7.4)

14.3 Recreation and culture (equivalent to COFOG groups 8.1 and 8.2)

14.4 Education (equivalent to COFOG groups 9.1 to 9.6)

14.5 Social protection (equivalent to COFOG groups 10.1 to 10.5 and group 10.7).

3.106 Collective consumption expenditure is the remainder of the government final consumption expenditure.

It consists of the following COFOG groups:

(a) general public services (division 1);

(b) defence (division 2);

(c) public order and safety (division 3);

(d) economic affairs (division 4);

(e) environmental protection (division 5);

(f) housing and community amenities (division 6);

(g) general administration, regulation, dissemination of general information and statistics (all divisions);

(h) research and development (all divisions).

3.107 The relationships between the various consumption concepts employed can be shown in Table 3.2.

Table 3.2 — Sector making expenditure

	Government	NPISHs	Households	Total acquisitions
Individual consumption	X (= Social transfers in kind	X (= Social transfers in kind)	X	Households actual individual final consumption
Collective consumption	X	0	0	Government's actual collective final consumption
Total	Government's final consumption expenditure	NPISHs final consumption expenditure	Households' final consumption expenditure	Actual final consumption = Total final consumption expenditure

X: applicable
0: not applicable

3.108 Final consumption expenditure of NPISHs is all individual. Total actual final consumption is equal to the sum of households' actual final consumption and actual final consumption of general government.

3.109 There are no social transfers in kind with the rest of the world (though there are such transfers in monetary terms). Total actual final consumption is equal to total final consumption expenditure.

Time of recording and valuation of final consumption expenditure

3.110 Expenditure on a good is recorded at the time of change of ownership; expenditure on a service is recorded when the delivery of the service is completed.

3.111 Expenditure on goods acquired under a hire purchase or similar credit agreement, and also under a financial lease, is recorded at the time the goods are delivered even if there is no change of ownership at this point.

3.112 Own-account consumption is recorded when the output retained for own final consumption is produced.

3.113 The final consumption expenditure of households is recorded at purchasers' prices. This is the price the purchaser actually pays for the products at the time of the purchase. A more detailed definition is in paragraph 3.06.

3.114 Goods and services supplied as employee compensation in kind are valued at basic prices when produced by the employer and at the purchasers' prices of the employer when bought in by the employer.

3.115 Retained goods or services for own consumption are valued at basic prices.

3.116 Final consumption expenditures by general government or NPISHs on products produced by themselves are recorded at the time they are produced, which is also the time of delivery of such services by government or NPISHs. For the final consumption expenditure on goods and services supplied via market producers, the time of delivery is the time of recording.

3.117 Final consumption expenditure (P.3) by general government or NPISHs is equal to the sum of their output (P.1), plus the expenditure on products supplied to households via market producers, part of social transfers in kind (D.632), minus the payments by other units, market output (P.11) and payments for non-market output (P.131), minus own-account capital formation (P.12).

Time of recording and valuation of actual final consumption

3.118 Goods and services are acquired by institutional units when they become the new owners of the goods and when the delivery of services to them is completed.

3.119 Acquisitions (actual final consumption) are valued at the purchasers' prices for the units that incur the expenditures.

3.120 Transfers in kind other than social transfers in kind from government and NPISHs are treated as if they were transfers in cash. Accordingly, the values of the goods or services are recorded as expenditures by the institutional units or sectors that acquire them.

3.121 The values of the two aggregates of final consumption expenditure and actual final consumption are the same. The goods and services acquired by resident households through social transfers in kind are valued at the same prices as those at which they are valued in the expenditure aggregates.

Gross capital formation (P.5)

3.122 Gross capital formation consists of:

(a) gross fixed capital formation (P.51g):

(1) consumption of fixed capital (P.51c);

(2) net fixed capital formation (P.51n);

(b) changes in inventories (P.52);

(c) acquisitions less disposals of valuables (P.53).

3.123 Gross capital formation is measured gross of consumption of fixed capital. Net capital formation is calculated by deducting consumption of fixed capital from gross capital formation.

Gross fixed capital formation (P.51g)

3.124 *Definition:* gross fixed capital formation (P.51) consists of resident producers' acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets realised by the productive activity of producer or institutional units. Fixed assets are produced assets used in production for more than one year.

3.125 Gross fixed capital formation consists of both positive and negative values:

(a) positive values:

(1) new or existing fixed assets purchased;

(2) fixed assets produced and retained for producers' own use (including own account production of fixed assets not yet completed or fully mature);

(3) new or existing fixed assets acquired through barter;

(4) new or existing fixed assets received as capital transfers in kind;

(5) new or existing fixed assets acquired by the user under a financial lease;

(6) major improvements to fixed assets and existing historic monuments;

(7) natural growth of those natural assets that yield repeat products;

(b) negative values, i.e. disposals of fixed assets recorded as negative acquisitions:

(1) existing fixed assets sold;

(2) existing fixed assets surrendered in barter;

(3) existing fixed assets surrendered as capital transfers in kind.

3.126 The disposals components of fixed assets exclude:

(a) consumption of fixed capital (which includes anticipated normal accidental damage);

(b) exceptional losses, such as those due to drought or other natural disasters, which are recorded as other change in the volume of assets.

3.127 The following types of gross fixed capital formation are distinguished:

(1) dwellings;

(2) other buildings and structures; this includes major improvements to land;

(3) machinery and equipment, such as ships, cars and computers;

(4) weapons systems;

(5) cultivated biological resources, e.g. trees and livestock;

(6) costs of ownership transfer on non-produced assets, like land, contracts, leases and licences;

(7) R&D, including the production of freely available R&D. Expenditure on R&D will only be treated as fixed capital formation when a high level of reliability and comparability of the estimates by the Member States has been achieved;

(8) mineral exploration and evaluation;

(9) computer software and databases;

(10) entertainment, literary or artistic originals;

(11) other intellectual property rights.

3.128 Major improvements to land include:

(a) reclamation of land from sea by the construction of dikes, sea walls or dams for this purpose;

(b) clearance of forests, rocks, etc. to enable land to be used in production for the first time;

(c) draining of marshes or the irrigation of deserts by the construction of dikes, ditches and irrigation channels; prevention of flooding or erosion by the sea or rivers by the construction of breakwaters, sea walls or flood barriers.

These activities may lead to the creation of substantial new structures such as sea walls, flood barriers and dams, but these structures are not used to produce other goods and services, but obtain more or better land, and it is the land, a non-produced asset, that is used in production. For example, a dam built to produce electricity serves a different purpose from a dam built to keep out the sea. Only the latter type of dam is classified as an improvement to land.

3.129 Gross fixed capital formation includes the following borderline cases:

(a) acquisitions of houseboats, barges, mobile homes and caravans used as residences of households and any associated structures such as garages;

(b) structures and equipment used by the military;

(c) light weapons and armoured vehicles used by non-military units;

(d) changes in livestock used in production year after year, such as breeding stock, dairy cattle, sheep reared for wool and draught animals;

(e) changes in trees that are cultivated year after year, such as fruit trees, vines, rubber trees, palm trees, etc.;

(f) improvements to existing fixed assets beyond ordinary maintenance and repairs;

(g) the acquisition of fixed assets by financial leasing;

(h) terminal costs, i.e. large costs associated with disposal, e.g. decommissioning costs of nuclear power stations or clean up costs of landfill sites.

3.130 Gross fixed capital formation excludes:

(a) transactions included in intermediate consumption, like:

(1) purchase of small tools for production purposes;

(2) ordinary maintenance and repairs;

(3) the acquisition of fixed assets to be used under an operational leasing contract (see also Chapter 15: Contracts, leases and licences). For the enterprise that is using the fixed asset, rentals are treated as intermediate consumption. For the owner of the asset, the cost of acquisition is recorded as gross fixed capital formation;

(b) transactions recorded as changes in inventories:

(1) animals raised for slaughter, including poultry;

(2) trees grown for timber (work-in-progress);

(c) machinery and equipment acquired by households for purposes of final consumption;

(d) holding gains and losses on fixed assets;

(e) catastrophic losses on fixed assets, e.g. destruction of cultivated assets and livestock by outbreaks of disease which is not normally covered by insurance, or damage due to abnormal flooding, wind damage or forest fires;

(f) funds set aside or put in reserve without any commitment for the actual purchase or construction of a specific capital good, e.g. a government fund for infrastructure.

3.131 Gross fixed capital formation in the form of improvements to existing fixed assets is recorded as acquisitions of new fixed assets of the same kind.

3.132 Intellectual property products are the result of research and development, investigation or innovation leading to knowledge, use of which is restricted by law or other means of protection.

Examples of intellectual property assets are:

(a) results of R&D;

(b) results of mineral exploration, measured as the costs of actual test drilling, aerial or other surveys, transportation, etc.;

(c) computer software and large databases to be used in production for more than one year;

(d) entertainment, literary or artistic originals of manuscripts, models, films, sound recordings, etc.

3.133 For both fixed assets and non-produced non-financial assets, the costs of ownership transfer incurred by their new owner consist of:

(a) charges incurred in taking delivery of the asset (new or existing asset) at the required location and time, such as transport charges, installation charges, erection charges, etc.;

(b) professional charges or commissions incurred, such as fees paid to surveyors, engineers, lawyers, valuers, etc., and commissions paid to estate agents, auctioneers, etc.;

(c) taxes payable by the new owner on the transfer of ownership of the asset. These taxes are taxes on the services of intermediaries and any tax on the transfer of ownership but not taxes on the asset bought.

All these costs are to be recorded as gross fixed capital formation by the new owner.

Time of recording and valuation of gross fixed capital formation

3.134 Gross fixed capital formation is recorded when the ownership of the fixed assets is transferred to the institutional unit that intends to use them in production.

This rule is modified for:

(a) financial leasing, when a change of ownership from lessor to lessee is imputed;

(b) own-account gross fixed capital formation, which is recorded when it is produced.

3.135 Gross fixed capital formation is valued at purchasers' prices including installation charges and other costs of ownership transfer. When produced on own-account it is valued at the basic prices of similar fixed assets, and if such prices are not available, at the costs of production plus a mark-up (except for non-market producers) for net operating surplus or mixed income.

3.136 Acquisitions of intellectual property products are valued in different ways:

(a) for mineral exploration: by the costs of actual test drillings and borings, and the costs incurred to make it possible to carry out tests, such as aerial or other surveys;

(b) for computer software: by purchasers' prices when purchased on the market, or at its estimated basic price, or if no basic price is available, at its costs of production plus a mark-up for net operating surplus (except for non-market producers) when developed in-house;

(c) for entertainment, literary or artistic originals: valued at the price paid by the purchaser when it is sold, or if not sold, the following methods of estimation are acceptable:

(i) at the basic price paid for similar originals;

(ii) the sum of its production costs plus a mark-up (except for non-market producers) for net operating surplus; or

(iii) the discounted value of expected receipts.

3.137 Disposals of existing fixed assets by sale are valued at basic prices, deducting any costs of ownership transfer incurred by the seller.

3.138 Costs of ownership transfer can apply to both produced assets, including fixed assets, and non-produced assets, such as land.

These costs are included in the purchasers' prices in the case of produced assets. They are separated from the purchases and sales themselves in the case of land and other non-produced assets, and recorded under a separate heading in the classification of gross fixed capital formation.

Consumption of fixed capital (P.51c)

3.139 *Definition:* consumption of fixed capital (P.51c) is the decline in value of fixed assets owned, as a result of normal wear and tear and obsolescence. The estimate of decline in value includes a provision for losses of fixed assets as a result of accidental damage which can be insured against. Consumption of fixed capital covers anticipated terminal costs, such as the decommissioning costs of nuclear power stations or oil rigs or the cleanup costs of landfill sites. Such terminal costs are recorded as consumption of fixed capital at the end of the service life, when the terminal costs are recorded as gross fixed capital formation.

3.140 Consumption of fixed capital shall be calculated for all fixed assets (except animals), including intellectual property rights, major improvements to land and costs of ownership transfers associated with non-produced assets.

3.141 Consumption of fixed capital is different from the depreciation allowed for tax purposes or the depreciation shown in business accounts. Consumption of fixed capital is estimated on the basis of the stock of fixed assets and the expected average economic life of the different categories of those goods. For the calculation of the stock of fixed assets, the perpetual inventory method (PIM) is applied whenever direct information on the stock of fixed assets is missing. The stock of fixed assets is valued at the purchasers' prices of the current period.

3.142 Losses of fixed assets occurring as a result of accidental damage which can be insured against are taken into account in calculating the average service life of the goods in question. For the economy as a whole the accidental damages within a given accounting period will be equal, or close, to the average. For individual units and groupings of units, actual and average accidental damage may differ. In this case, for sectors, any difference is recorded as other changes in volume of fixed assets.

3.143 Consumption of fixed capital shall be calculated according to the 'straight line' method, by which the value of a fixed asset is written off at a constant rate over the whole lifetime of the good.

3.144 In some cases, the geometric depreciation method is used when the pattern of decline in the efficiency of a fixed asset requires it.

3.145 In the system of accounts, consumption of fixed capital is recorded below each balancing item, which is shown gross and net. Recording 'gross' means without deducting consumption of fixed capital, while recording 'net' means after deducting consumption of fixed capital.

Changes in inventories (P.52)

3.146 *Definition:* changes in inventories are measured by the value of the entries into inventories less the value of withdrawals and the value of any recurrent losses of goods held in inventories.

3.147 Due to physical deterioration, or accidental damage or pilfering, recurrent losses may occur to all kinds of goods in inventories, such as:

(a) losses of materials and supplies;

(b) losses in the case of work-in-progress;

(c) losses of finished goods;

(d) losses of goods for resale (e.g. shoplifting).

3.148 Inventories consist of the following categories:

(a) materials and supplies:

materials and supplies consist of all products held in stock with the intention of using them as intermediate inputs in production; this includes products held in stock by the government. Items such as gold, diamonds, etc. are included when intended for industrial use or other production;

(b) work-in-progress:

work-in-progress consists of output produced that is not yet finished. It is recorded in the inventories of its producer. Examples of the different forms it can take are the following:

(1) growing crops;

(2) maturing trees and livestock;

(3) uncompleted structures (except those produced under a contract of sale agreed in advance or on own-account; both of these examples are treated as fixed capital formation);

(4) uncompleted other fixed assets, e.g. ships and oil rigs;

(5) partially completed research for a legal or consultant's dossier;

(6) partially completed film productions;

(7) partially completed computer programs.

Work-in-progress shall be recorded for any production process that is not finished at the end of the given period. This is significant in quarterly accounts, an example being agricultural crops not completing growth within a quarter of a year.

Reductions in work-in-progress take place when the production process is completed. At that point, all work-in-progress is transformed into a finished product;

(c) finished goods:

finished goods as part of inventories consist of outputs that their producer does not intend to process further before supplying them to other institutional units;

(d) goods for resale:

goods for resale are goods acquired for the purpose of reselling them unchanged from their present state.

Time of recording and valuation of changes in inventories

3.149 The time of recording and the valuation of changes in inventories is consistent with those of other transactions in products. This applies in particular to intermediate consumption (e.g. for materials and supplies), output (e.g. work-in-progress and output from storage of agricultural products) and gross fixed capital formation (e.g. work-in-progress). If goods are processed abroad with a change of economic ownership, the goods are to be included in exports (and later in imports). The export is reflected in a concomitant reduction in inventories, and the corresponding later import is recorded as an increase in inventories, provided it is not sold or used at once.

3.150 In measuring changes in inventories, goods entering inventories are valued at the time of entry, and goods being withdrawn are valued at the time of withdrawal.

3.151 The prices used to value goods in changes in inventories are as follows:

(a) output of finished goods transferred into the producer's inventories is valued as if they were sold at that time, at current basic prices;

(b) additions to work-in-progress are valued in proportion to the estimated current basic price of the finished product;

(c) reductions in work-in-progress due to work withdrawn from inventories when production is finished are valued at current basic prices of the unfinished product;

(d) goods transferred out of inventories for sale are valued at basic prices;

(e) goods for resale entering the inventories of wholesalers and retailers, etc. are valued at the actual or estimated purchasers' prices of the trader;

(f) goods for resale withdrawn from inventories are valued at the purchasers' prices at which they can be replaced at the time they are withdrawn, and not at the price when they were acquired.

3.152 Losses as a result of physical deterioration, insurable accidental damage or pilfering are recorded and valued as follows:

(a) for materials and supplies: as materials and supplies actually withdrawn to be used up in production (intermediate consumption);

(b) for work-in-progress: valued as deduction from the additions accruing to production carried out in the same period;

(c) for finished goods and goods for resale: treated as withdrawals at the current price of undeteriorated goods.

3.153 Where information is lacking, the following approximate methods for the estimation of change in inventories are used:

(a) when changes in the volume of inventories are regular, an acceptable approximate method is to multiply the volume change of the inventories by the average prices for the period. Purchasers' prices are used for inventories held by users or by wholesalers or retailers; basic prices are used for inventories held by their producers;

(b) when prices of the goods involved remain constant, fluctuations in the volume of inventories do not invalidate the approximation of estimating the change in inventories by multiplying the volume change by the average price;

(c) if both the volume and the prices of the inventories change substantially within the accounting period, more sophisticated approximation methods are required. For example, quarterly valuation of the changes in inventories or the use of information about the distribution of the fluctuations within the accounting period (fluctuations may be largest at the end of the calendar year, during harvest time, etc.);

(d) if information about the values at the beginning and end of the period are available (e.g. in case of wholesale or retail trade in which inventories often exist of many different products), but no separate information about prices and volumes, the changes in volume between the beginning and end of the period are estimated. One way of estimating the change in volumes is to estimate constant turn-over rates by type of product.

Seasonal changes in prices may reflect a change in quality, e.g. clearance prices or off-season prices for fruit and vegetables. These changes in quality are treated as changes in the volume.

Acquisitions less disposals of valuables (P.53)

3.154 *Definition:* valuables are non-financial goods that are not used primarily for production or consumption, do not deteriorate (physically) over time under normal conditions and are acquired and held primarily as stores of value.

3.155 Valuables include the following types of goods:

(a) precious stones and metals, such as diamonds, non-monetary gold, platinum, silver, etc.;

(b) antiques and other art objects, such as paintings, sculptures, etc.;

(c) other valuables, such as jewellery fashioned out of precious stones and metals and collectors' items.

3.156 Such types of goods are recorded as acquisition or disposal of valuables in the following examples:

(a) the acquisition or disposal of non-monetary gold, silver, etc. by central banks and other financial intermediaries;

(b) the acquisition or disposal of these goods by enterprises whose principal or secondary activity does not involve the production or trade in such types of goods. This acquisition or disposal is not included in the intermediate consumption or fixed capital formation of these enterprises;

(c) the acquisition or disposal of such goods by households. Such acquisitions are not included in final consumption expenditure by households.

In the ESA, by convention also the following cases are recorded as acquisition or disposal of valuables:

(a) the acquisition or disposal of these goods by jewellers and art dealers (following the general definition of valuables, the acquisition of these goods by jewellers and art dealers should be recorded as changes in inventories);

(b) the acquisition or disposal of these goods by museums (following the general definition of valuables, the acquisition by a museum of these goods should be recorded as fixed capital formation).

This convention avoids frequent reclassification between the three main types of capital formation, i.e. between acquisition less disposal of valuables, fixed capital formation and changes in inventories, e.g. in the case of transactions of such goods between households and art dealers.

3.157 The production of valuables is valued at basic prices. All other acquisitions of valuables are valued at the purchasers' prices paid for them, including any agents' fees or commissions. They include trade margins when bought from dealers. Disposals of valuables are valued at the prices received by sellers, after deducting any fees or commissions paid to agents or other intermediaries. Acquisitions less disposals of valuables between resident sectors cancel out, leaving only agents and dealers margins.

Exports and imports of goods and services (P.6 and P.7)

3.158 *Definition:* exports of goods and services consist of transactions in goods and services (sales, barter, and gifts) from residents to non-residents.

3.159 *Definition:* imports of goods and services consist of transactions in goods and services (purchases, barter, and gifts) from non-residents to residents.

3.160 Exports and imports of goods and services do not include:

(a) establishment trade, i.e.:

(1) deliveries to non-residents by non-resident affiliates of resident enterprises, e.g. sales abroad by foreign affiliates of a multinational owned/controlled by residents;

(2) deliveries to residents by resident affiliates of non-resident enterprises, e.g. sales by domestic affiliates of a foreign multinational;

(b) primary income flows to or from the rest of the world, such as compensation of employees, interest and revenues from direct investment. The revenues from direct investment may include an indistinguishable part for the provision of various services, e.g. training of employees, management services and the use of patents and trademarks;

(c) the cross-border sale or purchase of financial assets or non-produced assets, such as land.

3.161 Imports and exports of goods and services are distinguished into:

(a) intra-EU deliveries;

(b) imports and exports outside the EU.

Both types are referred to as imports and exports.

Exports and imports of goods (P.61 and P.71)

3.162 Imports and exports of goods occur when economic ownership of goods changes between residents and non-residents. This applies irrespective of corresponding physical movements of goods across frontiers.

3.163 For deliveries between affiliated enterprises (branch or subsidiary, or foreign affiliate): a change of economic ownership is imputed whenever goods are delivered between affiliated enterprises. This applies only when the establishment receiving the goods assumes responsibility for making the decisions about the levels of supply and prices at which their output is delivered for the market.

3.164 Exports of goods occur without the goods crossing the country's frontier in the following examples:

(a) goods produced by resident units operating in international waters are sold directly to non-residents in foreign countries. Examples of such goods are oil, natural gas, fishery products, maritime's salvage;

(b) transportation equipment or other movable equipment not tied to a fixed location;

(c) goods after changing ownership, which are lost or destroyed before they have crossed the frontier of the exporting country;

(d) merchanting, i.e. the purchase of a good by a resident from a non-resident and the subsequent resale of the good to another non-resident, without the good entering the merchant's economy.

Analogous cases occur for the imports of goods.

3.165 Imports and exports of goods include transactions between residents and non-residents in the following:

(a) non-monetary gold;

(b) silver bullion, diamonds and other precious metals and stones;

(c) paper money and coins not in circulation and unissued securities (valued as goods, not at face value);

(d) electricity, gas and water;

(e) livestock driven across frontiers;

(f) parcel post;

(g) government exports including goods financed by grants and loans;

(h) goods transferred to or from the ownership of a buffer stock organisation;

(i) goods delivered by a resident enterprise to its non-resident affiliates, except for goods for processing;

(j) goods received by a resident enterprise from its non-resident affiliates, except for goods for processing;

(k) smuggled goods or products not reported for taxes like import duties and VAT;

(l) other unrecorded shipments, such as gifts and those of less than a stated minimum value.

3.166 Imports and exports of goods exclude the following goods which nevertheless may cross the national frontier:

(a) goods in transit through a country;

(b) goods shipped to or from a country's own embassies, military bases or other enclaves inside the national frontiers of another country;

(c) transportation equipment and other movable kinds of equipment which leave a country temporarily, without any change of economic ownership, e.g. construction equipment for installation or construction purposes abroad;

(d) equipment and other goods which are sent abroad for processing, maintenance, servicing or repair; this applies also to goods processed to order abroad when a substantial physical change in the goods is involved;

(e) other goods which leave a country temporarily, being generally returned within a year in their original state and without change of economic ownership.

Examples are goods sent abroad for exhibition and entertainment purposes, goods under an operating lease, including leases for several years and goods returned without being sold to a non-resident;

(f) goods on consignment lost or destroyed after crossing a frontier before change of ownership occurs.

3.167 Imports and exports of goods are recorded when the ownership of the goods is transferred. A change of ownership is considered to occur at the time the parties to the transaction record it in their books or accounts. This may not coincide with the various stages of the contractual process, such as:

(a) the time of commitment (contract date);

(b) the time of provision of goods and services and acquisition of a claim for payment (transfer date);

(c) the time of settlement of that claim (payment date).

3.168 Imports and exports of goods are to be valued free on board at the border of the exporting country (FOB). This value is:

(a) the value of the goods at basic prices;

(b) plus the related transport and distributive services up to that point of the border, including the cost of loading on to a carrier for onward transportation;

(c) plus any taxes less subsidies on the goods exported; for intra-EU deliveries this includes VAT and other taxes on the goods paid in the exporting country.

In the supply and use and symmetric input-output tables, imports of goods for individual product groups are valued at the cost-insurance-freight (CIF) price at the border of the importing country.

3.169 *Definition:* the CIF price is the price of a good delivered at the frontier of the importing country, or the price of a service delivered to a resident, before the payment of any import duties or other taxes on imports or trade and transport margins within the country.

3.170 Proxies or substitute measures for the FOB value may be necessary under certain circumstances, such as:

(a) barter of goods are valued at the basic prices that would have been received if the goods had been sold for cash;

(b) transactions between affiliated enterprises: as a rule, actual transfer values are used. However, if they differ from market prices, they are replaced by an estimated market price equivalent;

(c) goods transferred under a financial lease: the goods are valued on the basis of the purchasers' price paid by the lessor, and not by the cumulative value of the rental payments;

(d) imports of goods estimated on the basis of customs data (for extra-EU trade) or Intrastat-information (for intra-EU trade). Both data sources do not apply FOB valuation; they use respectively the CIF value at the EU border and CIF values at the national border. As FOB-values are only used at the most aggregate level and CIF-values are used at the product group level, these modifications are applied at the most aggregate level, and the modification is known as the CIF/FOB adjustment;

(e) imports and exports of goods estimated on the basis of survey information or various types of ad hoc information. In such instances, the total value of sales split out by product is obtained. The estimate is based on purchasers' prices and not on FOB values.

Exports and imports of services (P.62 and P.72)

3.171 *Definition:* exports of services consist of all services rendered by residents to non-residents.

3.172 *Definition:* imports of services consist of all services rendered by non-residents to residents.

3.173 Exports of services include the following cases:

(a) transportation of exported goods after they have left the frontier of the exporting country when provided by a resident carrier (cases 2 and 3 in Table 3.3);

(b) transportation of imported goods by a resident carrier:

(1) up to the frontier of the exporting country when goods are valued FOB to offset the transportation value included in the FOB-value (case 3 in Table 3.4);

(2) up to the frontier of the importing country when goods are valued CIF to offset the transportation value included in the CIF-value (cases 3 and 2 CIF in Table 3.4);

(c) transportation of goods by residents on behalf of non-residents which does not involve imports or exports of the goods (e.g. the transport of goods that do not leave the country as exports or the transport of goods outside the domestic territory);

(d) passenger transportation on behalf of non-residents by resident carriers;

(e) processing and repair activities on behalf of non-residents; these activities are to be recorded net, i.e. as an export of services excluding the value of the goods processed or repaired;

(f) installation of equipment abroad when a project is of limited duration by its nature;

(g) financial services provided by residents to non-residents including both the explicit and implicit service charge, like FISIM;

(h) insurance services provided by residents to non-residents by the amount of the implicit service charge;

(i) expenditure by non-resident tourists and business travellers. The expenditure is classified as services; for the purposes of the supply and use and symmetric input-output tables, a breakdown by component products is necessary;

(j) expenditure by non-residents on health and education services provided by residents; this includes the provision of these services on the domestic territory as well as abroad;

(k) services of owner-occupied holidays homes of non-residents (see paragraph 3.77);

(l) royalties and license fees, receipts of which are associated with the authorised use of intellectual property rights, such as patents, copyrights, trademarks, industrial processes, franchises, etc., and with the use through licensing agreements of produced originals or prototypes, such as manuscripts, paintings, etc. paid by non-residents to residents.

3.174 There is an equivalent import of service as a mirror image of the list of exports of services in paragraph 3.173, and only the following imports of services require further description.

3.175 Imports of transport services include the following examples:

(a) transportation of exported goods up to the frontier of the exporting country when provided by a non-resident carrier to offset the transportation value included in the FOB-value of the exported goods (case 4 in Table 3.3);

(b) transportation of imported goods by a non-resident carrier:

(1) from the frontier of the exporting country as a separate transportation service when imported goods are valued FOB (cases 4 and 5 FOB in Table 3.4);

(2) from the frontier of the importing country as a separate transportation service when imported goods are valued CIF (in this case the value of the transportation service between the frontiers of the exporting and the importing country is already included in the CIF-value of the good; case 4 in Table 3.4);

(c) transportation of goods by non-residents on behalf of residents which does not involve imports or exports of goods (e.g. transport of goods in transit or transport outside the domestic territory);

(d) international or national passenger transportation on behalf of residents by non-resident carriers.

Imports of transport services do not include transportation of exported goods after they have left the frontier of the exporting country when provided by a non-resident carrier (cases 5 and 6 in Table 3.3). Exports of goods are valued FOB and all such transport services are thus to be regarded as transactions between non-residents, i.e. between a non-resident carrier and a non-resident importer. This applies when these transportation services are paid under export-CIF-contracts by the exporter.

3.176 Imports in respect of direct purchases abroad by residents cover all purchases of goods and services made by residents while travelling abroad for business or personal purposes. Two categories must be distinguished because they require different treatment:

(a) all business related expenditure by business travellers are intermediate consumption;

(b) all other expenditure, whether by business travellers or other travellers, are household final consumption expenditure.

3.177 Imports and exports of services are recorded at the time at which they are rendered. This time coincides with the time at which the services are produced. Imports of services are valued at purchasers' price and exports of services at basic prices.

Table 3.3 — The treatment of transportation of exported goods

Domestic territory	Territory in-between	Territory of importing country
1. resident carrier ⇒	2. resident carrier ⇒	3. resident carrier ⇒
4. non-resident carrier ⇒	5. non-resident carrier ⇒	6. non-resident carrier ⇒

	Exports of goods (FOB)	Exports of services	Imports of goods (CIF/FOB)	Imports of services
1.	x	—	—	—
2.	—	x	—	—
3.	—	x	—	—
4.	x	—	—	x
5.	—	—	—	—
6.	—	—	—	—

3.178 Explanation of how to read this table: the first part of this table indicates that there are six possibilities of transportation of exported goods, depending on whether the carrier is resident or not and depending on where the transport takes place: from a place on the domestic territory to the national border, from the national border to the border of the importing country or from the border of the importing country to a place within the importing country. In the second part of this table, for each of these six possibilities, it is indicated whether the transportation costs are to be recorded as exports of goods, exports of services, imports of goods or imports of services.

Table 3.4 — The treatment of transportation of imported goods

Domestic territory	Territory in between	Territory of exporting country
1. resident carrier ⇐	2. resident carrier ⇐	3. resident carrier ⇐
4. non-resident carrier ⇐	5. non-resident carrier ⇐	6. non-resident carrier ⇐

	Valuation of imported goods	Imports of goods	Imports of services	Exports of goods (FOB)	Exports of services
1.	CIF/FOB	—	—	—	—
2.	FOB CIF	— x	— —	— —	— x
3.	CIF/FOB	x	—	—	x
4.	CIF/FOB	—	x	—	—
5.	FOB CIF	— x	x —	— —	— —
6.	CIF/FOB	x	—	—	—

3.179 Explanation of how to read this table: the first part of this table indicates that there are six possibilities of transportation of imported goods, depending on whether the carrier is resident or not and depending on where the transport takes place: from a place in the exporting country to the border of this exporting country, from the border of the exporting country to the border of the importing country and from the national border to a place on the domestic territory. In the second part of this table, for each of these six possibilities, it is indicated whether the transportation costs are to be recorded as imports of goods, imports of services, exports of goods or exports of services. In some instances (cases 2 and 5), this recording depends on the valuation principle applied for imported goods. Note that the transition from valuation of imported goods at CIF to FOB consists of:

(a) CIF/FOB adjustment, i.e. from 2 CIF to 2 FOB (reduces total imports and exports);

(b) CIF/FOB reclassification, i.e. from 5 CIF to 5 FOB (leaves total imports and exports unchanged).

Transactions in existing goods

3.180 *Definition:* existing goods are goods that already have had a user (other than inventories).

3.181 Existing goods include:

(a) buildings and other fixed capital goods which have been sold by producer units to other units:

(1) to be reused as such;

(2) to be demolished or broken up; the resulting products becoming raw materials (e.g. scrap iron) used for the production of new goods (e.g. steel);

(b) valuables sold from one unit to another;

(c) consumer durables which have been sold by households to other units:

(1) to be reused as such;

(2) to be broken up and converted into demolition materials;

(d) non-durable goods (e.g. waste paper, rags, old clothes, old bottles, etc.) which have been sold by any unit, either to be used again or to become raw material for the manufacture of new goods.

The transfer of existing goods is recorded as a negative expenditure (acquisition) for the seller and a positive expenditure (acquisition) for the purchaser.

3.182 This definition of existing goods has the following consequences:

(a) when the sale of an existing fixed asset or valuable takes place between two resident producers, the positive and negative values recorded for gross fixed capital formation cancel out for the economy as a whole except for the costs of ownership transfer;

(b) when an existing immovable fixed asset (e.g. a building) is sold to a non-resident, the latter is treated as purchasing a financial asset, i.e. the equity of a notional resident unit. This notional resident unit is then deemed to purchase the fixed asset. The sale and purchase of the fixed asset take place between resident units;

(c) when an existing movable fixed asset, such as a ship or aircraft, is exported, no positive gross fixed capital formation is recorded in the economy to offset the seller's negative gross fixed capital formation;

(d) durable goods, such as vehicles, may be classified as fixed assets or as consumer durables depending upon the owner and the purpose for which they are used. If the ownership of such a good is transferred from an enterprise to a household to be used for final consumption, negative gross fixed capital formation is recorded for the enterprise and positive consumption expenditure for the household. Where ownership of such a good is transferred from a household to an enterprise, for the household negative final consumption expenditure is recorded and for the enterprise positive gross fixed capital formation is recorded;

(e) transactions in existing valuables are to be recorded as the acquisition of a valuable (positive gross capital formation) by the purchaser and as the disposal of a valuable (negative gross capital formation) by the seller. In case of a transaction with the rest of the world, the import or export of a good is to be recorded. The sale of a valuable by a household is not to be recorded as negative final consumption expenditure;

(f) when existing military durables are sold abroad by the government, this is recorded as an export of goods and as negative fixed capital formation by the government.

3.183 Transactions in existing goods are recorded at the time of change of ownership. The valuation principles appropriate to the type of transactions in products involved are applied.

Acquisitions less disposals of non-produced assets (NP)

3.184 *Definition:* non-produced assets consist of assets that have not been produced within the production boundary, and that may be used in the production of goods and services.

3.185 Three categories of acquisition less disposals of non-produced assets are distinguished:

(a) Acquisition less disposals of natural resources (NP.1);

(b) Acquisition less disposals of contracts, leases and licenses (NP.2);

(c) Purchases less sales of goodwill and marketing assets (NP.3).

3.186 Natural resources shall comprise the following categories:

(a) Land;

(b) Mineral and energy reserves;

(c) Non-cultivated biological resources;

(d) Water resources;

(e) Radio spectra;

(f) Other natural resources.

Natural resources exclude the produced asset cultivated biological resources. The purchase or sale of cultivated biological resources is not recorded as acquisition less disposal of natural resources; it is recorded as fixed capital formation. Also, payments for the temporary use of natural resources are not recorded as acquisition of natural resources; they are recorded as rent, i.e. as property income (see Chapter 15: Contracts, leases and licences).

3.187 Land is defined as the ground itself, including soil covering and associated surface water. The associated surface water includes any inland waters (reservoirs, lakes, rivers, etc.) over which ownership rights can be exercised.

3.188 The following items are not included under the heading of land:

(a) buildings or other structures on the land or through it (for example roads and tunnels);

(b) vineyards, orchards, or other plantations of trees and growing crops, etc.;

(c) subsoil assets;

(d) non-cultivated biological resources;

(e) water resources below the ground.

Items (a) and (b) are produced fixed assets, items (c), (d) and (e) are types of non-produced assets.

3.189 Acquisitions and disposals of land and other natural resources are valued at current market prices prevailing at the time the acquisitions/disposals occur. Transactions in natural resources are recorded at the same value in the accounts of the purchaser and in those of the seller. This value excludes the costs of the transfer of ownership of the natural resource. These costs are treated as gross fixed capital formation.

3.190 Contracts, leases and licenses as non-produced assets consist of the following classes:

(a) marketable operating leases;

(b) permits to use natural resources, e.g. fishing quota;

(c) permits to undertake specific activities, e.g. emission permits and licences for a limited number of casinos or to operate taxis in a certain area;

(d) entitlements to future goods and services on an exclusive basis, e.g. a footballer's contracts and a publisher's exclusive right to publish new works by a named author.

3.191 Contracts, leases and licenses as a category of non-produced assets exclude the operating lease of such assets; payments for the operating lease are recorded as intermediate consumption.

The value of acquisitions and disposals of contracts, leases and licences excludes the associated costs of ownership transfer. The costs of ownership transfer are a component of gross fixed capital formation.

3.192 *Definition:* the value of goodwill and marketing assets is the difference between the value paid for an enterprise as a 'going concern' and the sum of its assets less the sum of its liabilities. To calculate the total value of assets less liabilities, each individual asset and liability is separately identified and valued.

3.193 Goodwill is only recorded when its value is evidenced by a market transaction, for example by the sale of the whole corporation. Where identified marketing assets are sold individually and separately from the whole corporation, such sale is recorded under this item.

3.194 Acquisitions less disposals of non-produced assets are recorded in the capital account of the sectors, the total economy and the rest of the world.

CHAPTER 4

Distributive transactions

4.01 *Definition:* distributive transactions are transactions whereby the value added generated by production is distributed to labour, capital and government, and transactions redistributing income and wealth.

A distinction is drawn between current and capital transfers, with capital transfers redistributing saving or wealth, rather than income.

Compensation of employees (D.1)

4.02 *Definition:* compensation of employees (D.1) is defined as the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during an accounting period.

Compensation of employees is made up of the following components:

(a) wages and salaries (D.11):

- wages and salaries in cash,
- wages and salaries in kind;

(b) employers' social contributions (D.12):

- employers' actual social contributions (D.121):
  - employers' actual pension contributions (D.1211),
  - employers' actual non-pension contributions (D.1212),
- employers' imputed social contributions (D.122):
  - employers' imputed pension contributions (D.1221),
  - employers' imputed non-pension contributions (D.1222).

Wages and salaries (D.11)

Wages and salaries in cash

4.03 Wages and salaries in cash include social contributions, income taxes, and other payments payable by the employee, including those withheld by the employer and paid directly to social insurance schemes, tax authorities, etc. on behalf of the employee:

Wages and salaries in cash include the following kinds of remuneration:

(a) basic wages and salaries payable at regular intervals;

(b) enhanced payments, such as payments for overtime, night work, weekend work, disagreeable or hazardous circumstances;

(c) cost of living allowances, local allowances and expatriation allowances;

(d) bonuses or other exceptional payments linked to the overall performance of the enterprise made under incentive schemes; bonuses based on productivity or profits, Christmas and New Year bonuses excluding employee social benefits (see point (c) of paragraph 4.07); '13th to 14th month' pay also known as annual supplementary pay;

(e) allowances for transport to and from work, excluding allowances or reimbursement of employees for travelling, separation, removal and entertainment expenses incurred in the course of their duties (see point (a) of paragraph 4.07);

(f) holiday pay for official holidays or annual holidays;

(g) commissions, tips, attendance and directors' fees paid to employees;

(h) payments made by employers to their employees under saving schemes;

(i) exceptional payments to employees who leave the enterprise, where those payments are not linked to a collective agreement;

(j) housing allowances paid in cash by employers to their employees.

Wages and salaries in kind

4.04 *Definition:* wages and salaries in kind consist of goods and services, or other non-cash benefits, provided free of charge or at reduced prices by employers, that can be used by employees in their own time and at their own discretion, for the satisfaction of their own needs or wants or those of other members of their households.

4.05 Examples of wages and salaries in kind are:

(a) meals and drinks, including those consumed when travelling on business but excluding special meals or drinks necessitated by exceptional working conditions. Price reductions obtained in free or subsidised canteens, or obtained by luncheon vouchers, are included in wages and salaries in kind;

(b) own account and purchased housing or accommodation services of a type that can be used by all members of the household to which the employee belongs;

(c) uniforms or other forms of special clothing which employees choose to wear frequently outside of the workplace as well as at work;

(d) the services of vehicles or other durables provided for the personal use of employees;

(e) goods and services produced as outputs from the employer's own processes of production, such as free travel for the employees of railways or airlines, free coal for miners, or free food for employees in agriculture;

(f) the provision of sports, recreation or holiday facilities for employees and their families;

(g) transportation to and from work, except when organised in the employer's time; car parking when it would otherwise have to be paid for;

(h) child care for the children of employees;

(i) payments for the benefit of employees, made by employers to works councils or similar bodies;

(j) bonus shares distributed to employees;

(k) loans to employees at reduced rates of interest. The value of this benefit is estimated as the amount the employee would have to pay if interest at market conditions were charged, less the amount of interest actually paid. The benefit is recorded in wages and salaries in the generation of income account, and the corresponding imputed payment of interest from the employee to employer is recorded in the primary distribution of income account;

(l) stock options, when an employer gives an employee the option to buy stocks or shares at a specified price at a future date (see paragraphs 4.168 to 4.178);

(m) incomes generated by non-observed activities in corporate sectors and transferred to the employees participating in such activities for their private use.

4.06 Goods and services given to employees as wages and salaries in kind are valued at basic prices when produced by the employer, and at purchasers' prices when purchased by the employer. When provided free, the whole value of the wages and salaries in kind is calculated according to the basic prices (or purchasers' prices of the employer when purchased by the employer) of the goods and services in question. This value is reduced by the amount paid by the employee when the goods and services are given at reduced prices rather than free of charge.

4.07 Wages and salaries do not include the following:

(a) expenditure by employers necessary for the employers' production process. Examples are the following:

(1) allowances or reimbursement of employees for travelling, separation, removal and entertainment expenses incurred in the course of their duties;

(2) expenditure on providing amenities at the place of work, medical examinations required because of the nature of the work and supplying working clothes which are worn for work;

(3) accommodation services at the place of work of a kind which cannot be used by the households to which the employees belong, for example cabins, dormitories, workers' hostels, and huts;

(4) special meals or drinks necessitated by exceptional working conditions;

(5) allowances paid to employees for the purchase of tools, equipment or special clothing needed for their work, or that part of their wages or salaries which, under their contracts of employment, employees are required to devote to such purchases. To the extent that employees who are required by their contract of employment to purchase tools, equipment, special clothing, etc., are not fully reimbursed, the remaining expenses they incur are deducted from the amounts they receive in wages and salaries and the employers' intermediate consumption increased accordingly.

Expenditure on goods and services that employers are obliged to provide to their employees in order for them to be able to carry out their work is treated as intermediate consumption by employers;

(b) The amounts of wages and salaries which employers pay to their employees temporarily in the case of sickness, maternity, industrial injury, disability, etc. Such payments are treated as other social insurance non-pension benefits (D.6222), with the same amounts recorded under employers' imputed non-pension social contributions (D.1222);

(c) other employment-related social insurance benefits, in the form of children's, spouses', family, education or other allowances in respect of dependants, and in the form of the provision of free medical services (other than those necessitated by the nature of the work) to employees or their families;

(d) taxes payable by the employer on the wage and salary bill — for example, a payroll tax. Such taxes payable by enterprises are assessed either as a proportion of the wages and salaries paid or as a fixed amount per person employed. They are treated as other taxes on production;

(e) payments to outworkers on piecework rates. When the income received by the outworker is a function of the value of the outputs from some process of production for which that person is responsible, however much or little work was put in, this kind of remuneration implies that the worker is self-employed.

Employers' social contributions (D.12)

4.08 *Definition:* employers' social contributions are social contributions payable by employers to social security schemes or other employment-related social insurance schemes to secure social benefits for their employees.

An amount equal to the value of the social contributions incurred by employers in order to secure for their employees the entitlement to social benefits is recorded under compensation of employees. Employers' social contributions may be either actual or imputed.

Employers' actual social contributions (D.121)

4.09 *Definition:* employers' actual social contributions (D.121) consist of the payments made by employers for the benefit of their employees to insurers (social security and other employment-related social insurance schemes). Such payments cover statutory, conventional, contractual and voluntary contributions in respect of insurance against social risks or needs.

Although paid directly by employers to the insurers, such employers' contributions are treated as a component of the compensation of employees. The employees are then recorded as paying the contributions to the insurers.

Employers' actual social contributions are comprised of two categories, the contributions related to pensions and the contributions for other benefits, which are recorded separately under the following headings:

(a) Employers' actual pension contributions (D.1211);

(b) Employers' actual non-pension contributions (D.1212).

Employers' actual non-pension contributions correspond to contributions related to social risks and needs other than pensions, such as sickness, maternity, industrial injury, disability, redundancy, etc. of their employees.

Employers' imputed social contributions (D.122)

4.10 *Definition:* employers' imputed social contributions (D.122) represents the counterpart to other social insurance benefits (D.622) (less eventual employees' social contributions) paid directly by employers to their employees or former employees and other eligible persons without involving an insurance enterprise or autonomous pension fund, and without creating a special fund or segregated reserve for the purpose.

Employers' imputed social contributions are divided into two categories:

(a) Employers' imputed pension contributions (D.1221)

Social insurance schemes in respect of pensions are classified as defined contribution schemes or defined benefit schemes.

A defined contribution scheme is one where the benefits are determined by the contributions made to the scheme and the return from the investment of the funds. At the time of retirement, it is the employee that takes on all risks regarding benefits payable. For such schemes there are no imputed contributions unless the employer operates the scheme himself. In that case, the costs of operating the scheme are treated as an imputed contribution payable to the employee as part of compensation of employees. This amount is also recorded as final consumption expenditure by households on financial services.

A defined benefit scheme is one where benefits payable to the members are determined by the rules of the scheme, i.e. by the use of a formula to determine the payment or a minimum payment. In a typical defined benefit scheme, both employer and employee make contributions, with the employee contribution compulsory, being a percentage of current salary. The costs of meeting the quoted benefits are the responsibility of the employer. It is the employer who takes the risk for providing the benefits.

Under a defined benefit scheme, there is an imputed contribution by the employer calculated according to the following calculation:

The imputed contribution by the employer is equal to

the increase in benefit due to current period of employment

less	the sum of the employer's actual contribution,
less	the sum of any contribution by the employee,
plus	the costs of operating the scheme.

Some schemes may be expressed as non-contributory because no actual contributions are made by either the employer or employee. Nevertheless, an imputed contribution by the employer is calculated and imputed as just described.

Where pension entitlements of schemes for government employees are not recorded in the core accounts, the government employers' imputed pension contributions are to be estimated on the basis of actuarial calculations. Where the actuarial calculations cannot obtain a sufficient level of reliability, and in such cases only, two other approaches are possible to estimate government employers' imputed pension contributions as follows:

(1) on the basis of a reasonable percentage of wages and salaries paid to current employees; or

(2) as equal to the difference between current benefits payable and actual contributions payable (by both employees and government as employer).

(b) Employers' imputed non-pension contributions (D.1222)

The fact that certain social benefits are paid directly by employers, and not through the medium of social security funds or other insurers, does not prevent them from being recorded as social welfare benefits. Since the costs of such benefits form part of employers' labour costs, they are also included in the compensation of employees. Remuneration is therefore imputed for such employees equal in value to the amount of social contributions that is needed to secure the entitlements to the social benefits that they accumulate. Such amounts take into account any actual contributions made by the employer or employee and depend not only on the levels of the benefits currently payable but also on the ways in which employers' liabilities under such schemes are likely to evolve in the future as a result of factors such as expected changes in the numbers, age distribution and life expectancies of their present and previous employees. The values imputed for the contributions are based on the same kind of actuarial calculations that determine the levels of premiums charged by insurance enterprises.

In practice, however, it may be difficult to calculate precisely the amounts of such imputed contributions. The employer may make estimates itself, perhaps on the basis of the contributions paid into similar funded schemes, in order to calculate its likely liabilities in the future, and such estimates may be used when available. Another acceptable method is to use a reasonable percentage of wages and salaries paid to current employees. Otherwise, the only practical alternative is to use the unfunded non-pension benefits payable by the employer during the same accounting period as an estimate of the imputed remuneration that would be needed to cover the imputed contributions. The benefits actually paid in the current period provide an acceptable estimate of the contributions and associated imputed remuneration.

4.11 In the accounts of the sectors, the costs of direct social benefits appear firstly among uses in the generation of income account, as a component of the compensation of employees, and secondly among uses in the secondary distribution of income account, as social benefits. In order to balance the latter account, it is assumed that the households of employees pay back to the employers' sectors the employers' imputed social contributions, which finance, together with eventual employees' social contributions, the direct social welfare benefits provided to them by those same employers. This notional circuit is similar to that for employers' actual social contributions, which pass through the accounts of households and are then deemed to be paid by them to the insurers.

4.12 Time of recording of compensation of employees:

(a) wages and salaries (D.11) are recorded in the period during which the work is done. However, ad hoc bonuses or other exceptional payments such as 13th month payments are recorded when they are due to be paid. The time of recording of stock options is spread over the period between the grant date and vesting date. If the data are inadequate, the value of the option is recorded at vesting date;

(b) employers' actual social contributions (D.121) are recorded in the period during which the work is done;

(c) employers' imputed social contributions (D.122) are recorded according to following categories:

(1) Those representing the counterpart of compulsory direct social benefits are recorded in the period during which the work is done;

(2) Those representing the counterpart of voluntary direct social benefits are recorded at the time these benefits are provided.

4.13 The compensation of employees consists of the following components:

(a) the compensation of resident employees by resident employers;

(b) the compensation of resident employees by non-resident employers;

(c) the compensation of non-resident employees by resident employers.

The items listed in points (a) to (c) are recorded as follows:

(1) the compensation of resident and non-resident employees by resident employers groups together the items listed in points (a) and (c) and is recorded as uses in the generation of income account of the sectors and industries to which the employers belong;

(2) the compensation of resident employees by resident and non-resident employers groups together the items listed in points (a) and (b) and is recorded as resources in the allocation of primary income account of households;

(3) for the item referred to in point (b), compensation of resident employees by non-resident employers is recorded as uses in the external account of primary incomes and current transfers;

(4) for the item referred to in point (c), compensation of non-resident employees by resident employers, is recorded as resources in the

external account of primary incomes and current transfers.

Taxes on production and imports (D.2)

4.14 *Definition:* taxes on production and imports (D.2) consist of compulsory, unrequited payments, in cash or in kind, which are levied by general government, or by the institutions of the European Union, in respect of the production and importation of goods and services, the employment of labour, the ownership or use of land, buildings or other assets used in production. Such taxes are payable irrespective of profits made.

4.15 Taxes on production and imports are comprised of the following components:

(a) taxes on products (D.21):

(1) value added type taxes (VAT) (D.211);

(2) taxes and duties on imports excluding VAT (D.212);

— import duties (D.2121),

— taxes on imports excluding VAT and duties (D.2122);

(3) taxes on products, except VAT and import taxes (D.214);

(b) other taxes on production (D.29).

Taxes on products (D.21)

4.16 *Definition:* taxes on products (D.21) are taxes that are payable per unit of a given good or service produced or transacted. The tax may be a specific amount of money per unit of quantity of a good or service, or it may be calculated as a specified percentage of the price per unit or value of the goods and services produced or transacted. Taxes assessed on a product, irrespective of which institutional unit pays the tax, are included in taxes on products, unless specifically included under another heading.

Value added type taxes (VAT) (D.211)

4.17 *Definition:* a value added type tax (VAT) is a tax on goods or services collected in stages by enterprises and which is ultimately charged in full to the final purchaser.

This heading comprises the value added tax which is collected by general government and which is applied to national and imported products, as well as other deductible taxes applied under similar rules to those governing VAT. All value added type taxes are hereinafter referred to as: VAT. The common feature of VAT is that producers are obliged to pay to the government only the difference between the VAT on their sales and the VAT on their purchases for intermediate consumption and gross fixed capital formation.

VAT is recorded net in the sense that:

(a) outputs of goods and services and imports are valued excluding invoiced VAT;

(b) purchases of goods and services are recorded inclusive of non-deductible VAT. VAT is recorded as being borne by purchasers, not sellers, and then only by those purchasers who are not able to deduct it. The greater part of VAT is recorded as being paid on final uses, mainly on household consumption.

For the total economy, VAT is equal to the difference between total invoiced VAT and total deductible VAT (see paragraph 4.27).

Taxes and duties on imports excluding VAT (D.212)

4.18 *Definition:* taxes and duties on imports excluding VAT (D.212) comprise compulsory payments levied by general government or the institutions of the European Union on imported goods, excluding VAT, in order to admit them to free circulation on the economic territory, and on services provided to resident units by non-resident units.

The compulsory payments include:

(a) import duties (D.2121): these consist of customs duties, or other import charges, payable according to customs tariff schedules on goods of a particular type when they enter for use in the economic territory of the country of utilisation;

(b) taxes on imports, excluding VAT and import duties (D.2122).

This heading includes:

(1) levies on imported agricultural products;

(2) monetary compensatory amounts levied on imports;

(3) excise duties and special taxes on certain imported products, provided such duties and taxes on similar products of domestic origin are paid by the producer branch itself;

(4) general sales taxes payable on imports of goods and services;

(5) taxes on specific services provided by non-resident enterprises to resident units within the economic territory;

(6) profits of public enterprises exercising a monopoly over the imports of some goods or services, which are transferred to the state.

Net taxes and duties on imports excluding VAT are calculated by deducting import subsidies (D.311) from taxes and duties on imports excluding VAT (D.212).

Taxes on products, except VAT and import taxes (D.214)

4.19 *Definition:* taxes on products, except VAT and import taxes (D.214) consist of taxes on goods and services that become payable as a result of the production, export, sale, transfer, leasing or delivery of those goods or services, or as a result of their use for own consumption or own capital formation.

4.20 This heading includes, in particular:

(a) excise duties and consumption taxes (other than those included in taxes and duties on imports);

(b) stamp taxes on the sale of specific products, such as alcoholic beverages or tobacco, and on legal documents or cheques;

(c) taxes on financial and capital transactions, payable on the purchase or sale of non-financial and financial assets, including foreign exchange. They become payable when the ownership of land or other assets changes, except as a result of capital transfers (mainly inheritances and gifts). They are treated as taxes on the services of intermediaries;

(d) car registration taxes;

(e) taxes on entertainment;

(f) taxes on lotteries, gambling and betting, other than those on winnings;

(g) taxes on insurance premiums;

(h) other taxes on specific services: hotels or lodging, housing services, restaurants, transportation, communication, advertising;

(i) general sales or turnover taxes (excluding VAT type taxes): these include manufacturers' wholesale and retail sales taxes, purchase taxes, turnover taxes;

(j) profits of fiscal monopolies which are transferred to the state, except those exercising a monopoly over the imports of a given good or service (included in D.2122). Fiscal monopolies are public enterprises which have been granted a legal monopoly over the production or distribution of a particular kind of good or service in order to raise revenue and not in order to further the interests of public economic or social policy. When a public enterprise is granted monopoly powers as a matter of deliberate economic or social policy because of the special nature of the good or service or the technology of production — for example, public utilities, post offices and telecommunications, railways and so on — it is not considered as a fiscal monopoly;

(k) export duties and monetary compensatory amounts collected on exports.

4.21 Net taxes on products are obtained by deducting subsidies on products (D.31) from taxes on products (D.21).

Other taxes on production (D.29)

4.22 *Definition:* other taxes on production (D.29) consist of all taxes that enterprises incur as a result of engaging in production, independent of the quantity or value of the goods and services produced or sold.

Other taxes on production may be payable on the land, fixed assets or labour employed in the production process or on certain activities or transactions.

4.23 Other taxes on production (D.29) include the following:

(a) taxes on the ownership or use of land, buildings, or other structures utilised by enterprises in production (including owner-occupiers of dwellings);

(b) taxes on the use of fixed assets (for example vehicles, machinery and equipment) for purposes of production, irrespective of the assets being owned or rented;

(c) taxes on the total wage bill and payroll taxes;

(d) taxes on international transactions (for example travel abroad, foreign remittances, or similar transactions with non-residents) for purposes of production;

(e) taxes paid by enterprises for business and professional licences, if those licences are granted automatically on payment of the amounts due. In this case, it is likely that they are simply a means of raising revenue, even though the government may provide a certificate, or authorisation, in return. However, if the government uses the issue of licences to exercise some proper regulatory function, for example, when the government carries out checks on the suitability or safety of the business premises, on the reliability or safety of the equipment employed, on the professional competence of the staff employed, or on the quality or standard of goods or services produced as a condition for granting such a licence, the payments are treated as purchases of services rendered, unless the amounts charged for the licences are out of all proportion to the costs of the checks carried out by the government;

(f) taxes on pollution resulting from production activities. These consist of taxes levied on the emission or discharge into the environment of noxious gases, liquids or other harmful substances. They do not include payments made for the collection and disposal of waste or noxious substances by public authorities, which constitute intermediate consumption of enterprises;

(g) under-compensation of VAT resulting from the flat-rate system, frequently found in agriculture.

4.24 Other taxes on production exclude taxes on the personal use of vehicles etc. by households, which are recorded under current taxes on income, wealth, etc.

Taxes on production and imports paid to the institutions of the European Union

4.25 The taxes on production and imports paid to the institutions of the European Union include the following taxes collected by national governments on behalf of the institutions of the European Union: receipts from the common agricultural policy: levies on imported agricultural products, monetary compensatory amounts levied on exports and imports, sugar production levies and the tax on isoglucose, co-responsibility taxes on milk and cereals; receipts from trade with third countries: customs duties levied on the basis of the Integrated Tariff of the European Communities (TARIC).

The taxes on production and imports paid to the Institutions of the European Union do not include the VAT-based third own resource which is included in other current transfers under the heading 'VAT- and GNI-based EU own resources' (D.76) (see paragraph 4.140).

Taxes on production and imports: time of recording and amounts to be recorded

4.26 Recording of taxes on production and imports: taxes on production and imports are recorded when the activities, transactions or other events occur which create the liabilities to pay taxes.

4.27 Some economic activities, transactions or events, which generate an obligation to pay taxes, escape the notice of the tax authorities. Such activities, transactions or events do not give rise to financial assets or liabilities in the form of payables or receivables. The amounts recorded are only those evidenced by tax assessments, declarations or other instruments which create liabilities in the form of obligations to pay on the part of taxpayers. No imputations are made for taxes not evidenced by tax assessments.

Taxes recorded in the accounts are derived from two sources: amounts evidenced by assessments and declarations or cash receipts.

(a) If assessments and declarations are used, the amounts shall be adjusted by a coefficient reflecting assessed and declared amounts never collected. An alternative treatment is that a capital transfer (D.995), as described in point (j) of paragraph 4.165, to the relevant sectors is recorded equal to the same adjustment. The coefficients shall be estimated on the basis of past experience and current expectations in respect of assessed and declared amounts never collected. They shall be specific to different types of taxes.

(b) If cash receipts are used, they shall be time-adjusted so that the cash is attributed when the activity took place to generate the tax liability. This adjustment is based on the average time difference between the activity and cash tax receipt.

4.28 The total value of the taxes recorded includes interest charged on arrears of taxes due and fines imposed by taxation authorities where such interest and fines are not separately identifiable. The total value of taxes includes charges imposed in connection with the collection or recovery of taxes outstanding. The total value is reduced by the amount of any tax rebates made by general government as a matter of economic policy and any tax refunds made as a result of over-payments.

4.29 In the system of accounts, taxes on production and imports (D.2) are recorded as follows:

(a) on the uses side, in the generation of income account of the total economy;

(b) on the resources side, in the allocation of primary income account of the general government sector and in the external account of primary incomes and current transfers.

Taxes on products are recorded as resources in the goods and services account of the total economy. This enables the resources of goods and services — valued exclusive of taxes on products — to be balanced with the uses, which are valued inclusive of such taxes.

Other taxes on production (D.29) are recorded as uses in the generation of income accounts of the industries or sectors which pay them.

Subsidies (D.3)

4.30 *Definition:* subsidies (D.3) are current unrequited payments which general government or the institutions of the European Union make to resident producers.

The following are examples of the objectives of giving subsidies:

(a) influencing levels of production;

(b) influencing the prices of products; or

(c) influencing the remuneration of the factors of production.

Non-market producers can receive other subsidies on production only if those payments depend on general regulations applicable to both market and non-market producers.

Subsidies on products are not recorded in non-market output (P.13).

4.31 Subsidies granted by the institutions of the European Union cover only current transfers made directly by them to resident producer units.

4.32 Subsidies are classified into:

(a) subsidies on products (D.31):

(1) import subsidies (D.311);

(2) other subsidies on products (D.319);

(b) other subsidies on production (D.39).

Subsidies on products (D.31)

4.33 *Definition:* subsidies on products (D.31) are subsidies payable per unit of a good or service produced or imported.

The amount of subsidies on products can be specified in the following ways:

(a) a specific amount of money per unit of quantity of a good or service;

(b) a specified percentage of the price per unit;

(c) the difference between a specified target price and the market price paid by a buyer.

A subsidy on a product usually becomes payable when the good is produced, sold or imported, but it may also be payable in other circumstances such as when a good is transferred, leased, delivered or used for own consumption or own capital formation.

Subsidies on products only apply to market output (P.11) or to output for own final use (P.12).

Import subsidies (D.311)

4.34 *Definition:* import subsidies (D.311) consists of subsidies on goods and services that become payable when the goods cross the frontier for use in the economic territory or when the services are delivered to resident institutional units.

Import subsidies include losses incurred as a matter of deliberate government policy by government trading organisations whose function is to purchase products from non-residents and then sell them at lower prices to residents.

Other subsidies on products (D.319)

4.35 Other subsidies on products (D.319) include the following:

(a) subsidies on products used domestically: these consist of subsidies payable to resident producers in respect of their production which is used or consumed within the economic territory;

(b) losses of government trading organisations whose function is to buy the products of resident producers and then sell them at lower prices to residents or non-residents, when they are incurred as a matter of deliberate government economic or social policy;

(c) subsidies to public corporations and quasi-corporations to compensate for persistent losses which they incur on their productive activities as a result of charging prices which are lower than their average costs of production as a matter of deliberate government or European economic and social policy;

(d) direct subsidies on exports payable directly to resident producers when the goods leave the economic territory or the services are provided to non-residents — except repayments at the customs frontier of taxes on products previously paid and waiving of the taxes that would be due if the goods were to be sold or used inside the economic territory.

Other subsidies on production (D.39)

4.36 *Definition:* other subsidies on production (D.39) consist of subsidies except subsidies on products which resident producer units may receive as a consequence of engaging in production.

For their non-market output, non-market producers can receive other subsidies on production only if those payments from general government depend on general regulations applicable to market and non-market producers as well.

4.37 Other subsidies on production (D.39) include the following examples:

(a) subsidies on payroll or work force i.e. subsidies payable on the total wage or salary bill, or total work force, or on the employment of particular types of persons such as physically handicapped persons or persons who have been unemployed for long periods, or on the costs of training schemes organised or financed by enterprises;

(b) subsidies to reduce pollution: these consist of current subsidies intended to cover some or all of the costs of additional processing undertaken to reduce or eliminate the discharge of pollutants into the environment;

(c) grants for interest relief made to resident producer units, even when they are intended to encourage capital formation. When a grant serves the dual purpose of financing both the amortisation of the debt and the payment of interest on it, and when it is not possible to apportion it between two elements, the whole of the grant is treated as an investment grant.

Grants for interest relief are current transfers designed to lighten producers' operating costs. They are treated in the accounts as subsidies to the producers benefiting from them, even when the difference in the interest is paid directly by the government to the credit institution granting the loan;

(d) over-compensation of VAT resulting from the flat-rate system, often for example found in agriculture.

4.38 The following are not treated as subsidies (D.3):

(a) current transfers from general government to households in their capacity as consumers. These are treated either as social benefits (D.62 or D.63) or as miscellaneous current transfers (D.75);

(b) current transfers between different parts of general government in their capacity as producers of non-market goods and services, except other subsidies on production (D.39). Current transfers are recorded as current transfers within general government (D.73);

(c) investment grants (D.92);

(d) extraordinary payments into social insurance funds, in so far as such payments are designed to increase the actuarial reserves of these funds. Such payments are recorded as other capital transfers (D.99);

(e) transfers made by general government to non-financial corporations and quasi-corporations to cover losses accumulated over several financial years, or exceptional losses due to factors outside the control of the enterprise, which are recorded as other capital transfers (D.99);

(f) the cancellation of debts which producer units have incurred towards the government (resulting, for example, from loans advanced by a government agency to a non-financial enterprise which has accumulated trading losses over several financial years). Such transactions are treated in the accounts as other capital transfers (D.99);

(g) payments made by general government or by the rest of the world for damage to, or losses of, capital goods as a result of acts of war, other political events or national disasters. They are recorded as other capital transfers (D.99);

(h) shares and other equities in corporate enterprises purchased by general government, which are shown under the heading equity and investment fund shares (AF.5);

(i) payments made by a general government agency which has assumed responsibility for abnormal pension charges affecting a public enterprise. These payments are recorded as miscellaneous current transfers (D.75);

(j) payments made by general government to market producers to pay entirely, or in part, for goods and services that those market producers provide directly and individually to households in the context of social risks or needs (see paragraph 4.84), and to which the households have a right. These payments are included in individual consumption expenditure of general government (P.31) and subsequently in social transfers in kind — market production purchased by government and NPISHs (D.632) and actual individual consumption of households (P.41).

4.39 Time of recording: subsidies (D.3) are recorded when the transaction or the event (production, sale, import, etc.) which gives rise to the subsidy occurs.

Particular cases are the following:

(a) subsidies which take the form of the difference between the purchase price and the selling price charged by a government trading agency are recorded at the time the goods are bought by the agency;

(b) subsidies intended to cover a loss incurred by a producer are recorded at the time the general government agency decides to cover the loss.

4.40 Subsidies (D.3) are recorded as:

(a) negative uses in the generation of income account of the total economy;

(b) negative resources in the allocation of primary income account of the general government sector and in the external account of primary incomes and current transfers.

Subsidies on products are recorded as negative resources in the goods and services account of the total economy.

Other subsidies on production (D.39) are recorded as resources in the generation of income accounts of the industries or sectors which receive them.

Consequences of a system of multiple exchange rates on taxes on production and imports and on subsidies: multiple exchange rates are not currently applicable among the Member States. In such a system:

(a) implicit taxes on imports are treated as taxes on imports excluding VAT and import duties (D.2122);

(b) implicit taxes on exports are treated as taxes on products, except VAT and import taxes (D.214);

(c) implicit subsidies on imports are treated as import subsidies (D.311);

(d) implicit subsidies on exports are treated as other subsidies on products (D.319).

Property income (D.4)

4.41 *Definition:* property income (D.4) accrues when the owners of financial assets and natural resources put them at the disposal of other institutional units. The income payable for the use of financial assets is called investment income, while that payable for the use of a natural resource is called rent. Property income is the sum of investment income and rent.

Property incomes are classified as follows:

(a) interest (D.41);

(b) distributed income of corporations (D.42):

(1) dividends (D.421);

(2) withdrawals from income of quasi-corporations (D.422);

(c) reinvested earnings on foreign direct investment (D.43);

(d) other investment income (D.44):

(1) investment income attributable to insurance policy holders (D.441);

(2) investment income payable on pension entitlements (D.442);

(3) investment income attributable to collective investment fund shareholders (D.443);

(e) rents (D.45).

Interest (D.41)

4.42 *Definition:* interest (D.41) is property income receivable by the owners of a financial asset for putting it at the disposal of another institutional unit. It applies to the following financial assets:

(a) deposits (AF.2);

(b) debt securities (AF.3);

(c) loans (AF.4);

(d) other accounts receivable (AF.8).

Income on SDR holdings and allocations and on unallocated gold accounts is treated as interest. The financial assets giving rise to interest are claims of creditors over debtors. Creditors lend funds to debtors that lead to the creation of one or other of the financial instruments listed above.

Interest on deposits and loans

4.43 The amounts of interest on loans and deposits payable to and receivable from financial institutions include an adjustment for a margin that represents an implicit payment for the services provided by the financial institutions in providing loans and accepting deposits. The payment or receipt is divided into the service part and into the national accounts concept of interest. The actual payments or receipts to or from financial institutions, described as bank interest, need to be partitioned so that the national accounts concept of interest and the service charges may be recorded separately. The amounts of national accounts interest paid by borrowers to financial institutions is less than bank interest by the estimated values of the charges payable, while the amounts of national accounts interest receivable by depositors is higher than bank interest by the amount of the service charge payable. The values of the charges are recorded as sales of services in the production accounts of financial institutions and as uses in the accounts of their customers.

Interest on debt securities

4.44 Interest on debt securities comprise interest on bills and similar short-term instruments, and interest on bonds and debentures.

Interest on bills and similar short-term instruments

4.45 The difference between the face value and the price paid at the time of issue (i.e. the discount) is a measure of the interest payable over the life of the bill. The increase in the value of a bill due to the accumulation of accrued interest does not constitute a holding gain because it is due to an increase in the principal outstanding and not a change in the price of the asset. Other changes in the value of the bill are treated as holding gains/losses.

Interest on bonds and debentures

4.46 Bonds and debentures are long-term securities that give the holder the unconditional right to a fixed or contractually determined variable money income in the form of coupon payments, or to a stated fixed sum on a specified date or dates when the security is redeemed, or both of these terms.

(a) zero-coupon bonds: there are no coupon payments. The interest based on the difference between the redemption price and the issue price has to be distributed over the years to the maturity of the bond. The interest accruing each year is reinvested in the bond by its holder, thus counterpart entries equal to the value of the accrued interest are recorded in the financial account as the acquisition of more bond by the holder and as a further issue of more bond by the issuer or debtor (i.e. as a growth in the 'volume' of the original bond);

(b) other bonds, including deep-discounted bonds. The interest has two components:

(1) the amount of the money income receivable from coupon payments each period;

(2) the amount of interest accruing each period attributable to the difference between the redemption price and the issue price, calculated in the same way as for zero-coupon bonds;

(c) index-linked securities:

(1) the amounts of the coupon payments and/or the principal outstanding are linked to a general price index. The change in the value of the principal outstanding between the beginning and the end of a particular accounting period due to the movement in the relevant index is treated as interest accruing in that period, in addition to any interest due for payment in that period;

(2) the amounts to be paid at maturity are linked to a narrow index that includes a holding gain motive. Interest accruals are to be determined by fixing the rate of accrual at the time of issue. Accordingly, interest is the difference between the issue price and the market expectation, at inception, of all payments that the debtor will have to make; this amount is recorded as interest accruing over the life of the instrument. This approach records as income the yield-to-maturity at issuance, which incorporates the results of the indexation that are foreseen at the moment the instrument was created. Any deviation of the underlying index from the originally expected path leads to holding gains or losses which will not normally cancel out over the life of the instrument.

The interest accruing as a result of the indexing is effectively reinvested in the security and must be recorded in the financial accounts of the holder and issuer.

Interest rate swaps and forward rate agreements

4.47 Payment resulting from any kind of swap arrangement is recorded as a transaction in financial derivatives in the financial account, and not as interest recorded as property income. Transactions under forward rate agreements are recorded as transactions in financial derivatives in the financial account, and not recorded as property income.

Interest on financial leases

4.48 A financial lease is a method of financing for example the purchase of machinery and equipment. The lessor purchases the equipment and the lessee contracts to pay rentals which enable the lessor, over the period of the contract, to recover his costs including the interest foregone on the money used to purchase the equipment.

The lessor is treated as making a loan to the lessee equal to the value of the purchaser's price paid for the asset, this loan being repaid over the period of the lease. The rental paid each period by the lessee is therefore treated as having two components: a repayment of principal and a payment of interest. The rate of interest on the imputed loan is determined by the total amount paid in rentals over the life of the lease in relationship to the purchaser's price of the asset. The share of the rental that represents interest declines over the duration of the lease as the principal is repaid. The initial loan by the lessee, together with the subsequent repayments of principal, is recorded in the financial accounts of the lessor and lessee. The interest payments are recorded as interest in the primary distribution of income account.

Other interest

4.49 Other interest comprises the following:

(a) interest charged on bank overdrafts;

(b) extra interest paid on deposits left longer than originally agreed; and

(c) payments determined by lottery, to bond holders.

Time of recording

4.50 Interest is recorded on an accrual basis, that is, interest is recorded as accruing continuously over time to the creditor on the amount of principal outstanding. The interest accruing in each accounting period must be recorded whether or not it is actually paid or added to the principal outstanding. When it is not paid, the increase in the principal is recorded in the financial account as an acquisition of a financial asset by the creditor and an equal acquisition of a liability by the debtor.

4.51 Interest is recorded before the deduction of taxes levied on it. Interest received and paid is recorded inclusive of grants for interest relief, irrespective of whether those grants are directly paid to financial institutions, or to beneficiaries (see paragraph 4.37).

The value of the services provided by financial intermediaries being allocated among different customers, the actual payments or receipts of interest to or from financial intermediaries are adjusted to eliminate the margins that represent the implicit charges made by financial intermediaries. The amounts of interest paid by borrowers to financial intermediaries must be reduced by the estimated values of the charges payable, and on the contrary the amounts of interest receivable by depositors must be increased. The values of the charges are treated as payments for services rendered by financial intermediaries to their customers and not as payments of interest.

4.52 In the system of accounts, interest is recorded as:

(a) resources and uses in the allocation of primary income account of the sectors;

(b) resources and uses in the rest of the world account of primary incomes and current transfers.

Distributed income of corporations (D.42)

Dividends (D.421)

4.53 *Definition:* dividends (D.421) are a form of property income to which owners of shares (AF.5) become entitled as a result of, for example, placing funds at the disposal of corporations.

Raising equity capital through the issue of shares is a way of raising funds. In contrast to loan capital, equity capital does not give rise to a liability that is fixed in monetary terms and it does not entitle the holders of shares of a corporation to a fixed or predetermined income. Dividends are all distributions of profits by corporations to their shareholders or owners.

4.54 Dividends also include:

(a) shares issued to shareholders in payment of the dividend for the financial year. Issues of bonus shares, which represent the capitalisation of own funds in the form of reserves and undistributed profits and give rise to new shares to shareholders in proportion for their holdings, are not included;

(b) the income paid to general government by public enterprises which are recognised as independent legal entities not constituted as corporate enterprises;

(c) incomes generated by non-observed activities and transferred to the owners of corporations who participate in such activities for their private use.

4.55 Dividends (D.421) exclude super-dividends.

Super-dividends are dividends that are large relative to the recent level of dividends and earnings. In order to assess whether the dividends are large, the concept of distributable income is used. Distributable income of a corporation is equal to entrepreneurial income *plus* all current transfers receivable *less* all current transfers payable and *less* the adjustment for the change in pension entitlements. The ratio of dividends to distributable income over the recent past is used to assess the plausibility of the current level of dividends. If the level of dividends declared is greatly in excess, the dividends causing the excess are treated as financial transactions and classified as 'super-dividends'. Such super-dividends are treated as the withdrawal of owners' equity from the corporation (F.5). That treatment applies to corporations, whether incorporated or quasi-corporate and whether subject to foreign or domestic private control.

4.56 In the case of public corporations, super-dividends are large and irregular payments or payments that exceed the entrepreneurial income of the relevant accounting period, which are funded from accumulated reserves or sales of assets. Super-dividends of public corporations are to be recorded as withdrawal of equity (F.5) for the difference between the payments and the entrepreneurial income of the relevant accounting period (see paragraph 20.206).

Interim dividends are described in paragraph 20.207.

4.57 Time of recording: Although dividends represent a part of income that has been generated over a period, dividends are not recorded on an accrual basis. For a short period after a dividend is declared, but before it is actually payable, shares may be sold 'ex dividend' meaning that the dividend is still payable to the owner at the date the dividend was declared and not to the owner on the date payable. A share sold 'ex dividend' is therefore worth less than one sold without this constraint. The time of recording of dividends is the point in time at which the share price starts to be quoted on an ex-dividend basis and not at a price that includes the dividend.

Dividends are recorded as:

(a) uses in the allocation of primary income account of the sectors in which the corporations are classified;

(b) as resources in the allocation of primary income account of the sectors in which shareholders are classified;

(c) as uses and resources in the rest of the world account of primary incomes and current transfers.

Withdrawals from the income of quasi-corporations (D.422)

4.58 *Definition:* withdrawals from the income of quasi-corporations (D.422) are the amounts which entrepreneurs withdraw for their own use from the profits earned by the quasi-corporations which belong to them.

Such withdrawals are recorded before the deduction of current taxes on income, wealth, etc., which are deemed always to be paid by the owners of the businesses.

When a quasi-corporation makes a trading profit, the unit which owns it may choose to leave part or all of the profit in the business, especially for investment purposes. The income left in the business appears as saving by the quasi-corporation, and only the profits actually withdrawn by the owner units are recorded in the accounts under the heading withdrawals from the income of quasi-corporations.

4.59 When profits are earned in the rest of the world by the branch-offices, agencies, etc. of resident enterprises, in so far as these branch-offices etc. are treated as non-resident units, retained earnings appear as reinvested earnings on foreign direct investment (D.43). Only the income actually transferred to the parent enterprise is treated in the accounts as withdrawals from the income of quasi-corporations received from the rest of the world. The same principles are applied to deal with the relations between branch-offices, agencies, etc. operating on the economic territory and the non-resident parent enterprise to which they belong.

4.60 Withdrawals from the income of quasi-corporations include the net operating surplus received by residents as owners of land and buildings in the rest of the world, or by non-residents as owners of land or buildings on the economic territory concerned. In respect of transactions in land and buildings carried out on the economic territory of a country by non-resident units, notional resident units are created, in which the non-resident owners own the equity.

The rental value of owner-occupied dwellings abroad is registered as imports of services and the corresponding net operating surplus as primary income received from the rest of the world; the rental value of owner-occupied dwellings belonging to non-residents is registered as exports of services and the corresponding net operating surplus as primary income paid to the rest of the world.

Withdrawals from the income of quasi-corporations include incomes generated by non-observed activities of quasi-corporations that are transferred to the owners participating in such activities for their private use.

4.61 Withdrawals from the income of quasi-corporations do not include amounts which their owners receive from:

(a) the sale of existing fixed capital goods;

(b) the sale of land and other non-produced assets;

(c) withdrawals of equity.

Such amounts are treated as withdrawals from equity in the financial account as they amount to a partial or total liquidation equity in the quasi-corporation. If the quasi-corporation is owned by government, and if it runs a persistent operating deficit as a matter of deliberate government economic and social policy, any regular transfers of funds into the enterprise made by government to cover its losses are treated as subsidies.

4.62 Time of recording: withdrawals from the income of quasi-corporations are recorded when they are made by the owners.

4.63 In the system of accounts, withdrawals from the income of quasi-corporations appear as:

(a) uses in the allocation of primary income account of the sectors in which the quasi-corporations are classified;

(b) resources in the allocation of primary income account of the owner sectors;

(c) uses and resources in the external account of primary incomes and current transfers.

Reinvested earnings on foreign direct investment (D.43)

4.64 *Definition:* reinvested earnings on foreign direct investment (D.43) are equal to the operating surplus of the foreign direct investment enterprise

plus any property incomes or current transfers receivable,

minus any property incomes or current transfers payable, including actual remittances to foreign direct investors and any current taxes payable on the income, wealth, etc., of the foreign direct investment enterprise.

4.65 A foreign direct investment enterprise is an incorporated or unincorporated enterprise in which an investor resident in another economy owns 10 % or more of the ordinary shares or voting power in an incorporated enterprise, or the equivalent for an unincorporated enterprise. Foreign direct investment enterprises comprise those entities that are identified as subsidiaries, associates and branches. A subsidiary is where the investor owns more than 50 %, an associate is where the investor owns 50 % or less, and a branch is a wholly or jointly owned unincorporated enterprise. The foreign direct investment relationship may be direct or indirect as a result of a chain of ownership. 'Foreign direct investment enterprises' is a broader concept than 'foreign controlled corporations'.

4.66 Actual distributions may be made from the entrepreneurial income of foreign direct investment enterprises in the form of dividends or withdrawals of income from quasi-corporations. In addition, retained earnings are treated as if they were distributed and remitted to foreign direct investors in proportion to their ownership of the equity of the enterprise and then reinvested by them by means of additions to equity in the financial account. Reinvested earnings on foreign direct investment can be either positive or negative.

4.67 Time of recording: reinvested earnings on foreign direct investment are recorded when they are earned.

In the system of accounts, reinvested earnings on foreign direct investment are recorded as:

(a) uses and resources in the allocation of primary income account of the sectors;

(b) uses and resources in the external account of primary incomes and current transfers.

Other investment income (D.44)

Investment income attributable to insurance policy holders (D.441)

4.68 *Definition:* Investment income attributable to insurance policy holders corresponds to total primary incomes received from the investment of insurance technical reserves. The reserves are those where an insurance corporation recognises a corresponding liability to the policyholders.

Insurance technical reserves are invested by insurance enterprises in financial assets or land (from which net property income, i.e. after deducting any interest paid, is received) or in buildings (which generate net operating surpluses).

Investment income attributable to insurance policy holders is recorded separately between holders of non-life and life policies.

For non-life policies, the insurance corporation has a liability towards the policy holder of the amount of the premium deposited with the corporation but not yet earned, the value of any claims due but not yet paid and a reserve for claims not yet notified or notified but not yet settled. Set against this liability, the insurance corporation holds technical reserves. The investment income on these reserves is treated as income attributable to the policy holders, then distributed to the policy holders in the allocation of primary income account and paid back to the insurance corporation as a premium supplement in the secondary distribution of income account.

For an institutional unit operating a standardised loan guarantee scheme against fees, there could also be investment income earned on the reserves of the scheme and this must also be shown as being distributed to the units paying the fees (which may not be the same units which stand to benefit from the guarantees) and treated as supplementary fees in the secondary distribution of income account.

For life insurance policies and annuities, insurance corporations have liabilities towards the policy holders and annuitants equal to the present value of expected claims. Set against those liabilities, insurance corporations have funds belonging to the policy holders consisting of bonuses-declared-for-with-profits policies as well as provisions for both policy holders and annuitants of the payment of future bonuses and other claims. Those funds are invested in a range of financial and non-financial assets.

The bonuses declared to holders of life policies are recorded as investment income receivable by the policyholders and are treated as premium supplements paid by the policyholders to the insurance corporations.

The investment income attributable to life insurance policy holders is recorded as payable by the insurance company and receivable by households in the allocation of primary income account. Unlike the case of non-life insurance or pensions, the amount carries through to saving and is then recorded as a financial transaction, specifically an increase in the liabilities of life insurance corporations, in addition to new premiums less the service charge less benefits payable.

Investment income payable on pension entitlements (D.442)

4.69 Pension entitlements arise from one of two different types of pension schemes. These are defined contribution schemes and defined benefit schemes.

A defined contribution scheme is one where contributions by both employers and employees are invested on behalf of the employees as future pensioners. No other source of funding of pensions is available and no other use is made of the funds. The investment income payable on defined contribution entitlements is equal to the investment income on the funds *plus* any income earned by renting land or buildings owned by the fund.

The characteristic of a defined benefit scheme is that a formula is used to determine the level of payments to be made to pensioners. This characteristic makes it possible to determine the level of entitlements as the present value of all future payments, calculated using actuarial assumptions about life lengths and economic assumptions about the interest or discount rate. The present value of the entitlements existing at the start of the year increases because the date when the entitlements become payable is one year nearer. This increase is regarded as investment income attributed to the pension holders in the case of defined benefit scheme. The amount of the increase is neither affected by whether the pension scheme actually has sufficient funds to meet all the obligations nor by the type of increase in the funds, whether it is investment income or holding gains, for example.

Investment income attributable to collective investment fund shareholders (D.443)

4.70 Investment income attributable to collective investment fund shareholders, including mutual funds and unit trusts, consists of the following separate components:

— dividends attributable to collective investment fund shareholders (D.4431),

— retained earnings attributable to collective investment fund shareholders (D.4432).

The dividend component is recorded in exactly the same manner as dividends for individual corporations, as described above. The retained earnings component is recorded using the same principles as those described for foreign direct investment enterprises but is calculated excluding any reinvested earnings on foreign direct investment. The remaining retained earnings are attributed to the investment fund shareholders leaving the investment fund with no saving, and are re-injected into the fund by the investment fund shareholders in a transaction recorded in the financial account.

The property income received by mutual funds is recorded as shareholders' property income even if it is not distributed but reinvested on their behalf.

Shareholders indirectly pay out of their fund shares to management companies for managing their investments. This service charge is expenditure by shareholders, and not expenditure of funds.

Time of recording: other investment income is recorded when it accrues.

4.71 In the system of accounts, other investment income is recorded as:

(a) resources in the allocation of primary income account of policy and investment fund holders;

(b) uses in the allocation of primary income account of the insurers, pension funds and investment funds;

(c) resources and uses in the external account of primary incomes and current transfers.

Rent (D.45)

4.72 *Definition:* rent is the income receivable by the owner of a natural resource for putting the natural resource at the disposal of another institutional unit.

There are two different types of resource rents: rent on land, and rent on subsoil resources. Resource rents on other natural resources such as radio spectra follow the same pattern.

The distinction between rent and rentals is that rent is a form of property income and rentals are payments for services. Rentals are payments made under an operating lease to use a fixed asset belonging to another unit. Rent is a payment made under a resource lease for access to a natural resource.

Rent on land

The rent received by a landowner from a tenant constitutes a form of property income. Rents on land also include the rents payable to the owners of inland waters and rivers for the right to exploit such waters for recreational or other purposes, including fishing.

A landowner pays land taxes and incurs maintenance expenses as a consequence of owning the land. Such taxes and expenses are treated as payable by the person entitled to use the land, who is deemed to deduct them from the rent that he would otherwise be obliged to pay to the landowner. Rent reduced in this way by taxes or other expenses for which the landowner is liable is called 'after-tax rent'.

4.73 Rents on land do not include the rentals of buildings and of dwellings situated on it; those rentals are treated as the payment for a market service provided by the owner to the tenant of the building or dwelling, and are recorded in the accounts as the intermediate or final consumption of the tenant. If there is no objective basis on which to split the payment between rent on land and rental on the buildings situated on it, the whole amount is treated as rent when the value of the land is estimated to exceed the value of the buildings on it and as rental otherwise.

Rents on subsoil assets

4.74 This heading includes the royalties that accrue to owners of deposits of minerals or fossil fuels (coal, oil or natural gas), whether private or government units, who grant leases to other institutional units permitting them to explore or to extract such deposits over a specified period of time.

4.75 Time of recording of rents: rents are recorded in the period when payable.

4.76 In the system of accounts, rents are recorded:

(a) among resources and among uses in the allocation of primary income account of sectors;

(b) among resources and among uses in the external account of primary incomes and current transfers.

Current taxes on income, wealth, etc. (D.5)

4.77 *Definition:* current taxes on income, wealth, etc. (D.5) cover all compulsory, unrequited payments, in cash or in kind, levied periodically by general government and by the rest of the world on the income and wealth of institutional units, and some periodic taxes which are assessed neither on that income nor that wealth.

Current taxes on income, wealth, etc. are divided into:

(a) taxes on income (D.51);

(b) other current taxes (D.59).

Taxes on income (D.51)

4.78 *Definition:* taxes on income (D.51) consist of taxes on incomes, profits and capital gains. They are assessed on the actual or presumed incomes of individuals, households, corporations or NPIs. They include taxes assessed on holdings of property, land or real estate when these holdings are used as a basis for estimating the income of their owners.

Taxes on income include:

(a) taxes on individual or household income, examples of which are income from employment, property, entrepreneurship, pensions, etc., and including taxes deducted by employers, for example pay-as-you-earn taxes. Taxes on the income of owners of unincorporated enterprises are included here;

(b) taxes on the income or profits of corporations;

(c) taxes on holding gains;

(d) taxes on winnings from lotteries or gambling, payable on the amounts received by winners as distinct from taxes on the turnover of producers that organise gambling or lotteries which are treated as taxes on products.

Other current taxes (D.59)

4.79 Other current taxes (D.59) includes:

(a) current taxes on capital which consist of taxes payable on the ownership or use of land or buildings by owners, and current taxes on net wealth and on other assets, for example jewellery — except taxes mentioned in D.29 (which are paid by enterprises as a result of engaging in production) and those in D.51 (taxes on income);

(b) poll taxes, levied per adult or per household, independently of income or wealth;

(c) expenditure taxes, payable on the total expenditures of persons or households;

(d) payments by households for licences to own or use for non-business purposes vehicles, boats or aircraft, or for licences for recreational hunting, shooting or fishing, etc. The distinction between taxes and purchases of services from government is defined according to the same criteria as those used in the case of payments made by enterprises namely, if the issue of licenses involves little or no work on the part of government, the licences being granted automatically on payment of the amounts due, it is likely that they are simply a device to raise revenue, even though the government may provide some kind of certificate, or authorisation, in return; in such cases their payment is treated as taxes. If, however, the government uses the issue of licences to organise some proper regulatory function (such as checking the competence, or qualifications, of the person concerned), the payments made are treated as purchases of services from government rather than payments of taxes, unless the payments are clearly out of all proportion to the cost of providing the services;

(e) taxes on international transactions, for example travel abroad, foreign remittances, foreign investments, etc., except those payable by producers and import duties paid by households.

4.80 Current taxes on income, wealth, etc. do not include:

(a) inheritance taxes, death duties or taxes on gifts between living persons, which are deemed to be levied on the capital of the beneficiaries and are shown under the heading capital taxes (D.91);

(b) occasional or exceptional levies on capital or wealth, which are recorded as capital taxes (D.91);

(c) taxes on land, buildings or other assets owned or rented by enterprises and used by them for production, such taxes being treated as other taxes on production (D.29);

(d) payments by households for licences other than licences for the use of vehicles, boats or aircraft, or licences for recreational hunting, shooting or fishing: driving or pilot's licences, firearm licences, and fees to government such as museum or library admissions, garbage disposal fees, payments for passports, airport fees, court fees etc. which are treated in most cases as purchases of services rendered by government, if they satisfy the criteria set out in point (d) of paragraph 4.79 to be recorded as services.

4.81 The total value of the taxes includes interest charged on arrears of taxes due and fines imposed by taxation authorities if there is no data to estimate such interest and fines separately; it includes charges imposed in connection with the recovery and assessment of taxes outstanding, less the amount of any rebates made by general government as a matter of economic policy and any refunds made as a result of over-payments.

Subsidies and social benefits made available via the tax system in the form of tax credits and the incidence of linking payment systems with the tax collection system are increasing. Tax credits represent tax relief and so reduce the tax liability of the beneficiary.

If the tax credit system results in the beneficiary receiving the excess when the relief is greater than the liability, the tax credits system is a payable tax credit system. Under a payable tax credits system, payments can be awarded to non-taxpayers as well as taxpayers. Under a payable tax credits system, the whole amount of tax credits is recorded as government expenditure, and not as a reduction of tax revenue.

In contrast, some tax credit systems are non-payable tax credits systems where tax credits are limited to the size of the tax liability. Under a non-payable tax credits system, all tax credits are embedded in the tax system and reduce government tax revenue.

4.82 Current taxes on income, wealth, etc. are recorded at the time when activities, transactions or other events occur which create the liabilities to pay.

However, some economic activities, transactions or events, which under tax legislation ought to impose on the units concerned the obligation to pay taxes, permanently escape the attention of tax authorities. It would be unrealistic to assume that such activities, transactions or events give rise to financial assets or liabilities in the form of payables or receivables. The amounts to be recorded are determined by the amounts due for payment only when evidenced by tax assessments, declarations or other instruments which create liabilities in the form of clear obligations to pay on the part of taxpayers. Missing taxes are not imputed if not evidenced by tax assessments.

Taxes recorded in the accounts are derived from two sources: amounts evidenced by assessments and declarations, and cash receipts.

(a) If assessments and declarations are used, the amounts shall be adjusted by a coefficient reflecting assessed and declared amounts never collected. As an alternative treatment, a capital transfer to the relevant sectors is recorded equal to the same adjustment. The coefficients shall be estimated on the basis of past experience and current expectations in respect of assessed and declared amounts never collected. They shall be specific to different types of taxes;

(b) If cash receipts are used, they shall be time-adjusted so that the cash is attributed when the activities, transactions or other events took place to generate the tax liability (or when the amount of tax was determined, in the case of some income taxes). This adjustment is based on the average time difference between the activities, transactions or other events (or the determination of the amount of tax) and cash tax receipt.

When retained at source by an employer, current taxes on income, wealth, etc. are included in wages and salaries even if the employer did not pass them on to the general government. The households sector is shown as paying the full amount to the general government sector. The amounts actually unpaid are neutralised under D.995 as a capital transfer from general government to the employers' sectors.

In some cases, the liability to pay income taxes can only be determined in a later accounting period than that in which the income accrues. Some flexibility is therefore needed concerning the point in time at which such taxes are recorded. Income taxes deducted at source, such as PAYE taxes and regular prepayments of income taxes, may be recorded in the periods in which they are paid and any final tax liability on income can be recorded in the period in which the liability is determined.

Current taxes on income, wealth, etc. are recorded as:

(a) uses in the secondary distribution of income account of the sectors in which the taxpayers are classified;

(b) resources in the secondary distribution of income account of general government;

(c) uses and resources in the external account of primary incomes and current transfers.

Social contributions and benefits (D.6)

4.83 *Definition:* social benefits are transfers to households, in cash or in kind, intended to relieve them from the financial burden of a number of risks or needs, made through collectively organised schemes, or outside such schemes by government units and NPISHs; they include payments from general government to producers which individually benefit households and which are made in the context of social risks or needs.

4.84 The list of risks or needs which may give rise to social benefits is as follows:

(a) sickness;

(b) invalidity, disability;

(c) occupational accident or disease;

(d) old age;

(e) survivors;

(f) maternity;

(g) family;

(h) promotion of employment;

(i) unemployment;

(j) housing;

(k) education;

(l) general neediness.

In the case of housing, payments made by public authorities to tenants in order to reduce their rents are social benefits, with the exception of special benefits paid by public authorities in their capacity as employers.

4.85 Social benefits include:

(a) current and lump-sum transfers from schemes which receive contributions, cover the entire community or large sections of the community and are imposed and controlled by government units (social security schemes);

(b) current and lump sum transfers from schemes organised by employers on behalf of their employees, ex-employees or dependants (other employment related social insurance schemes). Contributions may be made by employees and/or employers; they may also be made by self-employed persons;

(c) current transfers from government units and NPISHs which are not conditional on previous payment of contributions and which are generally linked to an assessment of available income. Such transfers are commonly known as social assistance.

4.86 Social benefits exclude:

(a) insurance claims based on policies taken out solely on the own initiative of the insured, independently of his employer or government;

(b) insurance claims on policies taken out with the sole purpose of obtaining a discount, even if those policies follow from a collective agreement.

4.87 In order for an individual policy to be treated as part of a social insurance scheme, the eventualities or circumstances against which the participants are insured shall correspond to the risks or needs listed in paragraph 4.84, and, in addition, one or more of the following conditions shall be satisfied:

(a) participation in the scheme is obligatory either by law or under the terms and conditions of employment of an employee or group of employees;

(b) the scheme is a collective one operated for the benefit of a designated group of workers, whether employees, self-employed or non-employed, participation being restricted to members of that group;

(c) an employer makes a contribution (actual or imputed) to the scheme on behalf of an employee, whether or not the employee also makes a contribution.

4.88 *Definition:* social insurance schemes are schemes in which participants are obliged, or encouraged, by their employers or by general government, to take out insurance against certain eventualities or circumstances that may adversely affect their welfare or that of their dependants. In such schemes social contributions are paid by employees or others, or by employers on behalf of their employees, in order to secure entitlement to social insurance benefits, in the current or subsequent periods, for the employees or other contributors, their dependants or survivors.

Social insurance schemes are organised for groups of workers or are available by law to all workers or designated categories of workers, including non-employed persons as well as employees. They range from private schemes arranged for selected groups of workers employed by a single employer to social security schemes covering the entire labour force of a country. Participation in such schemes may be voluntary for the workers concerned, but it is more common for it to be obligatory. For example, participation in schemes organised by individual employers may be required by the terms and conditions of employment collectively agreed between employers and their employees.

4.89 Two types of social insurance schemes may be distinguished:

(a) The first consists of social security schemes covering the entire community, or large sections of the community, that are imposed, controlled and financed by government units. Pensions payable under such schemes may or may not be related to levels of salary of the beneficiary or history of employment. Non-pension benefits are less frequently linked to salary levels;

(b) The second type consists of other employment related schemes. Such schemes derive from an employer-employee relationship in the provision of pension and possibly other entitlements that are part of the conditions of employment and where responsibility for the provision of benefits does not devolve to general government under social security provisions.

4.90 Social insurance schemes organised by government units for their own employees as opposed to the working population at large are classified as other employment related schemes and not as social security schemes.

Net social contributions (D.61)

4.91 *Definition:* net social contributions are the actual or imputed contributions made by households to social insurance schemes to make provision for social benefits to be paid. Net social contributions (D.61) consist of:

employers' actual social contributions (D.611)

plus	employers' imputed social contributions (D.612),
plus	households' actual social contributions (D.613),
plus	households' social contribution supplements (D.614),
less	social insurance scheme service charges (D.61SC).

The social insurance scheme service charges are the service fees charged by the units administering the schemes. They appear here as part of the calculation for net social contributions (D.61); they are not redistributive transactions but part of output and consumption expenditure.

Employers' actual social contributions (D.611)

4.92 Employers' actual social contributions (D.611) correspond to flow D.121.

Employers' actual social contributions are paid by employers to social security schemes and other employment related social insurance schemes to secure social benefits for their employees.

As employers' actual social contributions are made for the benefit of their employees, their value is recorded as one of the components of compensation of employees together with wages and salaries in cash and in kind. The social contributions are then recorded as being paid by the employees as current transfers to the social security schemes, and other employment related social insurance schemes.

This heading is split into two categories:

(a) employers' actual pension contributions (D.6111) corresponds to flow D.1211;

(b) employers' actual non-pension contributions (D.6112) corresponds to flow D.1212.

4.93 Payments of actual social contributions may be compulsory by virtue of a statute or regulation, or they may be paid as a result of collective agreements in a particular industry or agreements between employer and employees in a particular enterprise, or because they are written into the contract of employment itself. In certain cases, the contributions may be voluntary.

Such voluntary contributions cover:

(a) social contributions which persons who are not legally obliged to contribute to a social security fund;

(b) social contributions paid to insurance enterprises (or pension funds classified in the same sector) as part of supplementary insurance schemes organised by enterprises for the benefit of their employees and which the latter join voluntarily;

(c) contributions to provident insurance schemes with membership open to employees or self-employed workers.

4.94 Time of recording: employers' actual social contributions (D.611) are recorded at the time when the work that gives rise to the liability to pay the contributions is carried out.

4.95 Social contributions payable to the general government sector recorded in the accounts are derived from two sources: amounts evidenced by assessments and declarations or cash receipts.

(a) If assessments and declarations are used, the amounts shall be adjusted by a coefficient reflecting assessed and declared amounts never collected. As an alternative treatment, a capital transfer to the relevant sectors could be recorded equal to the same adjustment. The coefficients shall be estimated on the basis of past experience and current expectations in respect of assessed and declared amounts never collected. They shall be specific to different types of social contributions.

(b) If cash receipts are used, they shall be time-adjusted so that the cash is attributed when the activity took place to generate the social contribution liability (or when the liability is created). This adjustment may be based on the average time difference between the activity (or the creation of the liability) and cash receipt.

When retained at source by the employer, social contributions payable to the general government sector are included in wages and salaries irrespective of whether the employer passed them to the general government. The households sector is then shown as paying the full amount to the general government sector. The amounts actually unpaid are neutralised under D.995 as a capital transfer from general government to the employers' sectors.

4.96 Employers' actual social contributions are recorded as:

(a) uses in the secondary distribution of income account of households;

(b) uses in the external account of primary incomes and current transfers (in the case of non-resident households);

(c) resources in the secondary distribution of income account of resident insurers or employers;

(d) resources in the external account of primary incomes and current transfers (in the case of non-resident insurers or employers).

Employers' imputed social contributions (D.612)

4.97 *Definition:* employers' imputed social contributions (D.612) represent the counterpart to social benefits (less eventual employees' social contributions) paid directly by employers (i.e. not linked to employers' actual contributions) to their employees or former employees and other eligible persons.

They correspond to flow D.122 as described under compensation of employees. Their value must be based on actuarial considerations, or on the basis of reasonable percentage of wages and salaries paid current employees or as equal to unfunded non-pension benefits payable by the enterprise during the same accounting period.

Employers' imputed social contributions D.612) is split into two categories:

(a) employers' imputed pension contributions (D.6121). They correspond to flow D.1221;

(b) employers' imputed non-pension contributions (D.6122). They correspond to flow D.1222.

4.98 Time of recording: employers' imputed social contributions which represent the counterpart of compulsory direct social benefits are recorded in the period during which the work is done. Employers' imputed social contributions which represent the counterpart of voluntary direct social benefits are recorded at the time the benefits are provided.

4.99 Employers' imputed social contributions are recorded as:

(a) uses in the secondary distribution of income account of households and in the external account of primary incomes and current transfers;

(b) resources in the secondary distribution of income account of the sectors to which the employers or resident insurers belong and in the external account of primary incomes and current transfers.

Households' actual social contributions (D.613)

4.100 *Definition:* Households' actual social contributions are social contributions payable on their own behalf by employees, self-employed or non-employed persons to social insurance schemes.

Households' actual social contributions (D.613) are split into two categories:

(a) households' actual pension contributions (D.6131);

(b) households' actual non-pension contributions (D.6132).

Time of recording: households' actual social contributions are recorded on an accrual basis. For those in work, this is at the time when the work that gives rise to the liability to pay the contributions is carried out. For non-employed persons, this is at the time where the contributions are to be made.

In the system of accounts, households' actual social contributions are recorded:

(a) among uses in the secondary distribution of income account of households and in the external account of primary incomes and current transfers;

(b) among resources in the secondary distribution of income account of the sectors to which the employers belong and in the external account of primary incomes and current transfers.

Households' social contribution supplements (D.614)

4.101 *Definition:* households' social contribution supplements consist of the property income earned during the accounting period on the stock of pension and non-pension entitlements.

This heading is split into two categories:

(a) households' pension contribution supplements (D.6141);

(b) households' non-pension contribution supplements (D.6142). The heading D.6142 corresponds to households' contributions supplements related to social risks and needs other than pensions, such as sickness, maternity, industrial injury, disability, redundancy, etc.

Households' social contribution supplements are included in property income payable by the administrators of pension funds to households in the allocation of primary income account (investment income payable on pension entitlements D.442).

As this income is retained by the administrators of pension funds in practice, it is treated in the secondary distribution of income account as being paid back by households to pension funds in the form of households' social contributions supplements.

Time of recording: households' social contribution supplements are recorded when they accrue.

Social benefits other than social transfers in kind (D.62)

4.102 The heading D.62 is made up of three sub-headings:

Social security benefits in cash (D.621);

Other social insurance benefits (D.622);

Social assistance benefits in cash (D.623).

Social security benefits in cash (D.621)

4.103 *Definition:* social security benefits in cash are social insurance benefits payable in cash to households by social security funds. Reimbursements are excluded and treated as social transfers in kind (D.632).

Such benefits are provided under social security schemes.

They may be split between:

— social security pension benefits in cash (D.6211),

— social security non-pension benefits in cash (D.6212).

Other social insurance benefits (D.622)

4.104 *Definition:* other social insurance benefits correspond to benefits payable by employers in the context of other employment related social insurance schemes. Other employment-related social insurance benefits are social benefits (in cash or in kind) payable by social insurance schemes other than social security to contributors to the schemes, their dependants or their survivors.

They typically include:

(a) the continued payment of normal, or reduced, wages during periods of absence from work as a result of ill health, accident, maternity, etc.;

(b) the payment of family, education or other allowances in respect of dependants;

(c) the payment of retirement or survivors' pensions to ex-employees or their survivors, and the payment of severance allowances to workers or their survivors in the event of redundancy, incapacity, accidental death, etc. (if linked to collective agreements);

(d) general medical services not related to the employee's work;

(e) convalescent and retirement homes.

Other social insurance benefits (D.622) may be split between:

— other social insurance pension benefits (D.6221),

— other social insurance non-pension benefits (D.6222).

Social assistance benefits in cash (D.623)

4.105 *Definition:* social assistance benefits in cash are current transfers payable to households by government units or NPISHs to meet the same needs as social insurance benefits but which are not made under a social insurance scheme requiring participation usually by means of social contributions.

They therefore exclude all benefits paid by social security funds. Social assistance benefits may be payable in the following circumstances:

(a) no social insurance scheme exists to cover the circumstances in question;

(b) although a social insurance scheme, or schemes, may exist, the households in question do not participate and are not eligible for social insurance benefits;

(c) social insurance benefits are deemed to be inadequate to cover the needs in question the social assistance benefits being paid in addition;

(d) as a matter of general social policy.

Such benefits do not include current transfers paid in response to events or circumstances that are not normally covered by social insurance schemes (i.e. transfers made in response to natural disasters, recorded under other current transfers or under other capital transfers).

4.106 Time of recording of social benefits other than social transfers in kind (D.62):

(a) in cash, they are recorded when the claims on the benefits are established;

(b) in kind, they are recorded at the time the services are provided, or at the time the changes of ownership of goods provided directly to households by non-market producers take place.

4.107 Social benefits other than social transfers in kind (D.62) are recorded as:

(a) uses in the secondary distribution of income account of the sectors granting the benefits;

(b) uses in the external account of primary incomes and current transfers (in the case of benefits granted by the rest of the world);

(c) resources in the secondary distribution of income account of households;

(d) resources in the external account of primary incomes and current transfers (in the case of benefits granted to non-resident households).

Social transfers in kind (D.63)

4.108 *Definition:* social transfers in kind (D.63) consist of individual goods and services provided for free or at prices that are not economically significant to individual households by government units and NPISHs, whether purchased on the market or produced as non-market output by government units or NPISHs. They are financed out of taxation, other government income or social security contributions, or out of donations and property income in the case of NPISHs.

Services provided for free, or at prices that are not economically significant, to households are described as individual services to distinguish them from collective services provided to the community as a whole, or large sections of the community, such as defence and street lighting. Individual services consist mainly of education and health services, although other kinds of services such as housing services, cultural and recreational services are also frequently provided.

4.109 Social transfers in kind (D.63) are subdivided into:

Social transfers in kind — general government and NPISHs non-market production (D.631)

Definition: social transfers in kind — general government and NPISHs non-market production (D.631) are individual goods and services provided directly to the beneficiaries by non-market producers. Any payments made by the households themselves should be deducted.

Social transfers in kind — market production purchased by general government and NPISHs (D.632)

Definition: social transfers in kind — market production purchased by general government and NPISHs (D.632) are individual goods and services

(a) in the form of reimbursements by social security funds of approved expenditures made by households on specific goods and services; or

(b) provided directly to the beneficiaries by market producers from which general government purchases the corresponding goods and services.

Any payments made by the households themselves are to be deducted.

When a household purchases a good or service for which it is subsequently reimbursed, in part or in whole, by a social security fund, the household can be regarded as if it were acting on behalf of the social security fund. In effect, the household provides a short-term credit to the social security fund that is liquidated as soon as the household is reimbursed.

The amount of the expenditure reimbursed is recorded as being incurred directly by the social security fund at the time the household makes the purchase, while the only expenditure recorded for the household is the difference, if any, between the purchaser's price paid and the amount reimbursed. Thus, the amount of the expenditure reimbursed is not treated as a current transfer in cash from the social security funds to households.

4.110 Examples of social transfers in kind (D.63) are medical or dental treatments, surgery, hospital accommodation, spectacles or contact lenses, medical appliances or equipment, and similar goods or services meeting social risks or needs.

Other examples not covered by a social insurance scheme are social housing, dwelling allowance, day nurseries, professional training, reductions on transport prices (provided that there is a social purpose), and similar goods and services in the context of social risks or needs. Outside the scope of social risks or needs, when government provides individual households with goods and services such as recreational, cultural or sport services for free or at prices which are not economically significant, these are treated as social transfers in kind — government and NPISHs non-market production (D.631).

4.111 Time of recording: social transfers in kind (D.63) are recorded at the time the services are provided, or at the time the changes of ownership of goods provided directly to households by producers take place.

Social transfers in kind (D.63) are recorded:

(a) among uses in the redistribution of income in kind account of the sectors granting the benefits;

(b) among resources in the redistribution of income in kind account of households.

The consumption of the goods and services transferred is recorded in the use of adjusted disposable income account.

There are no social transfers in kind with the rest of the world (they are registered in D.62 social benefits other than social transfers in kind).

Other current transfers (D.7)

Net non-life insurance premiums (D.71)

4.112 *Definition:* net non-life insurance premiums (D.71) are premiums payable under policies taken out by institutional units. The policies taken out by individual households are those taken out on their own initiative and for their own benefit, independently of their employers or government and outside any social insurance scheme. Net non-life insurance premiums comprise both the actual premiums payable by policy holders to obtain insurance cover during the accounting period (premiums earned) and the premium supplements payable out of the property income attributed to insurance policy holders, after deducting the service charges of insurance enterprises arranging the insurance.

Net non-life insurance premiums are the amounts available to provide cover against various events or accidents resulting in damage to goods or property, or harm to persons as a result of natural or human causes, examples being fires, floods, crashes, collisions, theft, violence, accidents, sickness, etc., or against financial losses resulting from events such as sickness, unemployment, accidents, etc.

Net non-life insurance premiums are split into two categories:

(a) net non-life direct insurance premiums (D.711);

(b) net non-life reinsurance premiums (D.712).

4.113 Time of recording: net non-life insurance premiums are recorded when they are earned.

The insurance premiums from which the service charges are deducted are those parts of the total premiums, paid in the current period or previous periods, that cover risks outstanding in the current period.

Premiums earned in the current period must be distinguished from the premiums due for payment during the current period, which are likely to cover risks in future periods as well as the current period.

Net non-life insurance premiums are recorded as:

(a) uses in the secondary distribution of income account of resident policy holders;

(b) uses in the external account of primary incomes and current transfers (in the case of non-resident policy holders);

(c) resources in the secondary distribution of income account of resident insurance enterprises;

(d) resources in the external account of primary incomes and current transfers (in the case of non-resident insurance enterprises).

Non-life insurance claims (D.72)

4.114 *Definition:* non-life insurance claims (D.72) are the claims due under contracts in respect of non-life insurance, that is, the amounts which insurance enterprises are obliged to pay in settlement of injuries or damage suffered by persons or goods (including fixed capital goods).

This heading is split into two categories:

(a) non-life direct insurance claims (D.721);

(b) non-life reinsurance claims (D.722).

4.115 Non-life insurance claims does not include payments which constitute social benefits.

The settlement of a non-life insurance claim is treated as a transfer to the claimant. Such payments are treated as current transfers, even when large sums may be involved as a result of the accidental destruction of a fixed asset or serious personal injury to an individual.

Exceptionally large claims, e.g. in the wake of a disaster, may be treated not as current transfers but as capital transfers (see point (k) of paragraph 4.165).

The amounts received by claimants are usually not committed for any particular purpose, and goods or assets which have been damaged or destroyed need not necessarily be repaired or replaced.

Claims arise because of damage or injuries that the policy holders cause to the property or persons of third parties. In such cases, valid claims are recorded as being payable directly by the insurance enterprise to the injured parties and not indirectly via the policy holder.

4.116 Net reinsurance premiums and claims are calculated in exactly the same manner as non-life insurance premiums and claims. As the reinsurance business is concentrated in a few countries, most reinsurance policies are with non-resident units.

Some units, especially government units, may provide a guarantee against a debtor defaulting in conditions that have the same characteristics as non-life insurance. This happens when many guarantees of the same sort are issued and it is possible to make a realistic estimate of the overall level of defaults. In such cases, the fees paid (and the property income earned on them) are treated in the same way as non-life insurance premiums and the calls under the standardised loans guarantees are treated in the same way as non-life insurance claims.

4.117 Time of recording: non-life insurance claims are recorded at the time the accident or other event insured against occurs.

They are recorded as:

(a) uses in the secondary distribution of income account of resident insurance enterprises;

(b) uses in the external account of primary incomes and current transfers (in the case of non-resident insurance enterprises);

(c) resources in the secondary distribution of income account of the beneficiary sectors;

(d) resources in the external account of primary incomes and current transfers (in the case of non-resident beneficiaries).

Current transfers within general government (D.73)

4.118 *Definition:* current transfers within general government (D.73) include transfers between the different subsectors of general government (central government, state government, local government and social security funds) with the exception of taxes, subsidies, investment grants and other capital transfers.

Current transfers within general government (D.73) do not include transactions on behalf of another unit; these are recorded only once in the accounts, in the resources of the beneficiary unit on whose behalf the transaction is made (see paragraph 1.78). This situation arises particularly when a government agency (e.g. a central government department) collects taxes which are automatically transferred, in total or in part, to another government agency (e.g. a local authority). In such cases, the tax receipts destined for the other government agency are shown as if they were collected directly by that agency and not as a current transfer within general government. The solution applies especially in the case of taxes destined for another government agency which take the form of additional rates superimposed on taxes levied by central government. Delays in remitting the taxes from the first to the second government unit give rise to entries under 'other accounts receivable/payable' in the financial account.

Transfers of tax receipts which form part of a block transfer from central government to another government agency are included in current transfers within general government. Such transfers do not correspond to any specific category of taxes and they are not made automatically but mainly through certain funds (county and local authority funds) in accordance with scales of apportionment laid down by central government.

4.119 Time of recording: current transfers within general government are recorded at the time the regulations in force stipulate they are to be made.

4.120 Current transfers within general government are recorded as uses and resources in the secondary distribution of income account of the subsectors of general government. Current transfers within general government are flows internal to the general government sector, and do not appear in a consolidated account for the sector as a whole.

Current international cooperation (D.74)

4.121 *Definition:* current international cooperation (D.74) includes all transfers in cash or in kind between general government and governments or international organisations in the rest of the world, except investment grants and other capital transfers.

4.122 Heading D.74 covers:

(a) the contributions of the government to international organisations (excluding taxes payable by member governments to supranational organisations);

(b) current transfers which general government receive from the institutions or organisations referred to in point (a). Current transfers which the institutions of the European Union make directly to resident market producers are recorded as subsidies paid by the rest of the world;

(c) current transfers between governments, either in cash (e.g. payments intended to finance the budget deficits of foreign countries or overseas territories) or in kind (e.g. counterpart of gifts of food, military equipment, emergency aid after natural disasters in the form of food, clothing, medicines, etc.);

(d) wages and salaries paid by a government, an institution of the European Union or an international organisation, to advisers or technical assistance experts made available to developing countries.

Current international cooperation includes transfers between general government and international organisations located in the country, as international organisations are not treated as resident institutional units of the countries in which they are located.

4.123 Time of recording: the time the regulations in force stipulate the transfers are to be made in the case of obligatory transfers, or the time the transfers are made in the case of voluntary transfers.

4.124 Current international cooperation is recorded as:

(a) uses and resources in the secondary distribution of income account of the general government sector;

(b) uses and resources in the external account of primary incomes and current transfers.

Miscellaneous current transfers (D.75)

Current transfers to NPISHs (D.751)

4.125 *Definition:* current transfers to NPISHs include all voluntary contributions (other than legacies), membership subscriptions and financial assistance which NPISHs receive from households (including non-resident households) and, to a lesser extent, from other units.

4.126 Current transfers to NPISHs include the following:

(a) regular subscriptions paid by households to trade unions and political, sporting, cultural, religious and similar organisations classified in the sector NPISHs;

(b) voluntary contributions (other than legacies) from households, corporate enterprises and the rest of the world to NPISHs, including transfers in kind in the form of gifts of food, clothing, blankets, medicines, etc. to charities for distribution to resident or non-resident households. Such treatment applies to consumption goods, as transfers of large gifts (valuables treated as non-financial assets) are recorded in other capital transfers (D.99) (see point (e) of paragraph 4.165).

Gifts of unwanted or used articles from households are not recorded as transfers;

(c) assistance and grants from general government, other than transfers made for the specific purpose of financing capital expenditure, which are shown under investment grants.

Excluded from current transfers to NPISHs are payments of membership dues or subscriptions to market NPIs serving businesses, such as chambers of commerce or trade associations, which are treated as payments for services provided.

4.127 Time of recording: current transfers to NPISHs are recorded at the time they are made.

4.128 Current transfers to NPISHs are recorded as:

(a) uses in the secondary distribution of income account of the contributing sectors;

(b) uses in the external account of primary incomes and current transfers;

(c) resources in the secondary distribution of income account of the NPISHs sector.

Current transfers between households (D.752)

4.129 *Definition:* current transfers between households (D.752) consist of all current transfers in cash or in kind made, or received, by resident households to, or from, other resident or non-resident households. In particular, they comprise remittances by emigrants or workers permanently settled abroad (or working abroad for a period of a year or longer) to members of their family living in their country of origin, or by parents to children in another location.

4.130 Time of recording: current transfers between households are recorded at the time the transfers occur.

4.131 Current transfers between households are recorded as:

(a) uses and resources in the secondary distribution of income account of households;

(b) uses and resources in the external account of primary incomes and current transfers.

Other miscellaneous current transfers (D.759)

Fines and penalties

4.132 *Definition:* fines and penalties imposed on institutional units by courts of law or quasi-judicial bodies are treated as other miscellaneous current transfers (D.759).

4.133 The following are not included in other miscellaneous current transfers (D.759):

(a) fines and penalties imposed by tax authorities for the evasion or late payment of taxes, which cannot be distinguished from the taxes themselves and remain classified as taxes;

(b) payments of fees to obtain licences, such payments being either taxes or payments for services provided by government units.

4.134 Time of recording: fines and penalties are recorded at the time the liabilities arise.

Lotteries and gambling

4.135 *Definition:* the amounts paid for lottery tickets or placed in bets consist of two elements: the payment of a service charge to the unit organising the lottery or gambling and a residual current transfer that is paid out to the winners.

The service charge may be substantial and cover taxes on the production of gambling services. The transfers are regarded in the system as taking place directly between those participating in the lottery or gambling, that is, between households. When non-resident households take part significant net transfers can arise between the households sector and the rest of the world.

Time of recording: residual current transfers are recorded at the time they are made.

Payments of compensation

4.136 *Definition:* payments of compensation consist of current transfers paid by institutional units to other institutional units in compensation for injury to persons or damage to property, excluding payments of non-life insurance claims. Payments of compensation are compulsory payments awarded by a court of law, or voluntary payments agreed out of court. This heading covers voluntary payments made by government units or NPISHs in compensation for injuries or damage caused by natural disasters other than those classified as capital transfers.

4.137 Time of recording: payments of compensation are recorded when they are made (voluntary payments) or when they are due (compulsory payments).

4.138 Other forms of other miscellaneous current transfers:

(a) current transfers from NPISHs to general government which are not taxes;

(b) payments by general government to public enterprises classified as non-financial corporate and quasi-corporate enterprises intended to cover abnormal pension charges;

(c) travelling fellowships and awards paid to resident or non-resident households by general government or NPISHs;

(d) bonus payments on savings granted at intervals by general government to households in order to reward them for their saving during the period;

(e) the refunds by households of expenditure incurred on their behalf by social welfare organisations;

(f) current transfers from NPISHs to the rest of the world;

(g) sponsoring by corporations if those payments cannot be regarded as purchases of advertising or other services (for instance, transfers for a good cause, or scholarships);

(h) current transfers from general government to households in their capacity as consumers, if not recorded as social benefits;

(i) the counterpart transfer from the central bank to MFIs (S.122 and S.125) to cover the intermediate consumption of the non-directly allocated part of the output of the central bank (see Chapter 14: FISIM).

4.139 Time of recording: the transfers listed in 4.138 are recorded when they are made, except those from or to general government, which are recorded when they are due.

Other miscellaneous current transfers appear as:

(a) resources and uses in the secondary distribution of income account of all sectors;

(b) resources and uses in the external account of primary incomes and current transfers.

VAT- and GNI-based EU own resources (D.76)

4.140 *Definition:* the VAT- and GNI-based third and fourth EU own resources (D.76) are current transfers paid by the general government of each Member State to the institutions of the European Union.

The VAT-based third EU own resource (D.761) and the GNI-based fourth EU own resource (D.762) are contributions to the budget of the Union institutions. The level of the contribution of each Member State is based on the levels of their VAT base and their GNI.

The heading D.76 also includes miscellaneous non-tax contributions of the government to the institutions of the European Union (D.763).

Time of recording: VAT- and GNI-based third and fourth own resources are recorded when they are due to be paid.

VAT- and GNI-based third and fourth own resources are recorded as:

(a) uses in the secondary distribution of income account of general government;

(b) resources in the external account of primary incomes and current transfers.

Adjustment for the change in pension entitlements (D.8)

4.141 *Definition:* the adjustment for the change in pension entitlements (D.8) represents the adjustment needed to make appear in the saving of households the change in the pension entitlements on which households have a definite claim. The pension entitlement change comes from contributions and benefits recorded in the secondary distribution of income account.

4.142 Since households are treated in the financial accounts and balance sheets of the system as owning the pension entitlements, an adjustment item is necessary to ensure that any excess of pension contributions over pension receipts does not affect household saving.

In order to neutralise this effect, an adjustment equal to:

the total value of actual and imputed social contributions in respect of pensions payable into pension schemes in which households have a definite claim

plus the total value of contribution supplements payable out of property income attributed to pension schemes beneficiaries

minus the value of associated service charges

minus the total value of pensions paid out as social insurance benefits by pension schemes

is added to the disposable income, or adjusted disposable income, of households in the use of income accounts before arriving at saving.

In this way, the saving of households is the same as it would be had pension contributions and pension receipts not been recorded as current transfers in the secondary distribution of income account. This adjustment item is necessary in order to reconcile the saving of households with the change in their pension entitlements recorded in the financial account of the system. Opposite adjustments are, of course, needed in the use of income accounts of the units responsible for paying pensions.

4.143 Time of recording: the adjustment is recorded according to the timing of the flows which compose it.

4.144 The adjustment for the change in pension entitlements is recorded as:

(a) uses in the use of income accounts of the sectors in which the units responsible for paying pensions are classified;

(b) uses in the external account of primary incomes and current transfers (in the case of non-resident institutions);

(c) resources in the use of income accounts of the households sector;

(d) resources in the external account of primary incomes and current transfers (in the case of non-resident households).

Capital transfers (D.9)

4.145 *Definition:* capital transfers require the acquisition or disposal of an asset, or assets, by at least one of the parties to the transaction. Whether made in cash or in kind, they result in a commensurate change in the financial, or non-financial, assets shown in the balance sheets of one or both parties to the transaction.

4.146 A capital transfer in kind consists of the transfer of ownership of an asset (other than inventories and cash), or the cancellation of a liability by a creditor, without any counterpart being received in return.

A capital transfer in cash consists of the transfer of cash that the first party has raised by disposing of an asset, or assets (other than inventories), or that the second party is expected, or required, to use for the acquisition of an asset, or assets (other than inventories). The second party, the recipient, is obliged to use the cash to acquire an asset, or assets, as a condition on which the transfer is made.

The transfer value of a non-financial asset is valued according to the estimated price at which the asset, whether new or used, could be sold on the market plus any transport, installation or other costs of ownership transfer incurred by the donor but excluding any such charges incurred by the recipient. Transfers of financial assets are valued in the same way as other acquisitions or disposals of financial assets or liabilities.

4.147 Capital transfers include capital taxes (D.91), investment grants (D.92) and other capital transfers (D.99).

Capital taxes (D.91)

4.148 *Definition:* capital taxes (D.91) consist of taxes levied at irregular and very infrequent intervals on the values of the assets or net worth owned by institutional units or on the values of assets transferred between institutional units as a result of legacies, gifts between persons, or other transfers.

4.149 Capital taxes (D.91) include:

(a) taxes on capital transfers: inheritance taxes, death duties and taxes on gifts between persons, which are levied on the capital of the beneficiaries. Taxes on sales of assets are not included;

(b) capital levies: occasional and exceptional levies on assets or net worth owned by institutional units. These include betterment levies, that is taxes on the increase in the value of agricultural land due to planning permission to develop the land for commercial or residential purposes.

Taxes on capital gains are not recorded as capital taxes, but as current taxes on income, wealth, etc.

4.150 Taxes recorded in the accounts come from two sources: amounts evidenced by assessments and declarations, or cash receipts.

(a) If assessments and declarations are used, the amounts are adjusted by a coefficient reflecting assessed and declared amounts never collected. As an alternative treatment, a capital transfer to the relevant sectors is recorded equal to the same adjustment. The coefficients are estimated on the basis of past experience and current expectations in respect of assessed and declared amounts never collected. They are specific to different types of taxes;

(b) If cash receipts are used, they are time-adjusted so that the cash is attributed to when the activity took place to generate the tax liability, or if this is not known, when the amount of tax was determined. This adjustment is based on the average time difference between the activity (or the determination of the amount of tax) and cash tax receipt.

4.151 Capital taxes are recorded as:

(a) changes in liabilities and net worth (-) in the capital account of the sectors in which the taxpayers are classified;

(b) changes in liabilities and net worth (+) in the capital account of general government;

(c) changes in liabilities and net worth in the capital account of the rest of the world.

Investment grants (D.92)

4.152 *Definition:* investment grants (D.92) consist of capital transfers in cash or in kind made by governments or by the rest of the world to other resident or non-resident institutional units to finance all or part of the costs of their acquiring fixed assets.

Investment grants made by the rest of the world include those paid directly by the institutions of the European Union (e.g. transfers made by the European Agriculture Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD)).

4.153 Investment grants in kind consist of transfers of transport equipment, machinery and other equipment by governments to other resident or non-resident units and also the direct provision of buildings or other structures for resident or non-resident units.

4.154 The value of capital formation carried out by general government for the benefit of other sectors of the economy is recorded as investment grants whenever the beneficiary is identifiable and becomes the owner of the capital. In such cases, the capital formation is recorded as changes in assets in the capital account of the beneficiary and is financed by an investment grant which is recorded as changes in liabilities and net worth in the same account.

4.155 Investment grants (D.92) include both lump sum payments designed to finance capital formation during the same period, and instalment payments in respect of capital formation carried out during an earlier period. Those parts of the annual payments by general government to enterprises which represent the amortisation of debts of enterprises undertaken for the purpose of government capital formation projects are treated as investment grants.

4.156 Grants for interest relief made by general government are excluded from investment grants. The assumption by public authorities of part of the interest charges is a current distributive transaction. Nevertheless, when a grant serves the dual purpose of financing the amortisation of the debt contracted and the payment of the interest on the capital borrowed, and when it is not possible to separate these two elements, the whole of the grant is treated in the accounts as an investment grant.

4.157 Investment grants to non-financial corporate and quasi-corporate enterprises include, in addition to grants to private enterprises, capital grants to public enterprises recognised as institutional units, provided that the government department which makes the grant does not retain a claim against the public enterprise.

4.158 Investment grants to the households sector include equipment and modernisation grants to businesses other than corporate or quasi-corporate enterprises and grants to households for the construction, purchase and improvement of dwellings.

4.159 Investment grants to general government include payments (except grants for interest relief) made to subsectors of general government for the purpose of financing capital formation. Investment grants within general government are flows internal to the general government sector and do not appear in a consolidated account for the sector as whole. Examples of investment grants within general government are transfers from central government to local government for the specific purpose of financing their gross fixed capital formation. Transfers intended for various indeterminate purposes are recorded as current transfers within general government, even if they are used to cover expenditure on capital formation.

4.160 Investment grants to non-profit institutions from general government and from the rest of the world are distinguished from current transfers to non-profit institutions by using the criteria set out in paragraph 4.159.

4.161 Investment grants to the rest of the world are restricted to transfers with the specific objective of financing capital formation by non-resident units. They include, for example, unrequited transfers for the construction of bridges, roads, factories, hospitals or schools in developing countries, or for constructing buildings for international organisations. They may comprise instalment payments over a period of time as well as single payments. This heading also covers the supply of fixed capital goods free of charge or at a reduced value.

4.162 Time of recording: investment grants in cash are recorded when the payment is due to be made. Investment grants in kind are recorded when the ownership of the asset is transferred.

4.163 Investment grants are recorded as:

(a) changes in liabilities and net worth (-) in the capital account of general government;

(b) changes in liabilities and net worth (+) in the capital account of the sectors receiving the grants;

(c) changes in liabilities and net worth in the capital account of the rest of the world.

Other capital transfers (D.99)

4.164 *Definition:* other capital transfers (D.99) cover transfers other than investment grants and capital taxes which do not themselves redistribute income but redistribute saving or wealth among the different sectors or subsectors of the economy or the rest of the world. They can be made in cash or kind (cases of debt assumption or debt cancellation) and correspond to voluntary transfers of wealth.

4.165 Other capital transfers (D.99) include the following transactions:

(a) payments by general government or by the rest of the world to the owners of capital goods destroyed or damaged by acts of war, other political events or natural disasters (floods etc.);

(b) transfers from general government to non-financial corporate and quasi-corporate enterprises to cover losses accumulated over several financial years or exceptional losses from causes beyond the control of the enterprise (even in the case of a capital injection);

(c) transfers between subsectors of general government designed to cover unexpected expenditure or accumulated deficits. Such transfers between subsectors of general government are flows within the general government sector and do not appear in a consolidated account for the sector as a whole;

(d) non-recurrent bonus payments on savings granted by general government to households to reward them for their savings carried out over a period of several years;

(e) legacies, large gifts between persons, and donations between units belonging to different sectors, including legacies or large gifts to non-profit institutions (NPIs). Examples of gifts to NPIs are gifts to universities to cover the costs of building new residential colleges, libraries, laboratories, etc.;

(f) the counterpart transaction of cancellation of debts by agreement between institutional units belonging to different sectors or subsectors (for example, the cancellation by the government of a debt owed to it by a foreign country; payments in fulfilment of guarantees which free defaulting debtors from their obligations) — except the particular case of taxes and social contributions payable to the general government sector (see point (j)). Such cancellations by mutual agreement are treated as a capital transfer from the creditor to the debtor equal to the value of the outstanding debt at the time of cancellation. Likewise the counterpart transaction of debt assumption, and of other similar transactions (activation of guarantees related to non-standardised guarantee schemes, or debt rescheduling where part of debt is extinguished or transferred), is another capital transfer. However, the following are excluded:

(1) cancellation of financial claims against and assumption of liabilities from quasi-corporations by the owner of the quasi-corporation. This case is treated as a transaction in equity and investment fund shares (F.5);

(2) debt cancellation against and debt assumption from a public corporation by government which disappears as an institutional unit in the system. This case is recorded in the other changes in the volume of assets account (K.5);

(3) debt cancellation against and debt assumption from a public corporation by government as a part of an ongoing process of privatisation to be achieved in a short-term perspective. This case is

treated as a transaction in equity and investment fund shares (F.5).

The writing-off of debt is not a transaction between institutional units and therefore is not recorded in either the capital account or the financial account. If the creditor decides such a write-off, it is recorded in the other changes in the volume of assets accounts of the creditor and the debtor. Provisions for bad debt are treated as book-keeping entries that are internal to the institutional producer unit and are not recorded except in the case of expected losses on non-performing loans, which are recorded as memorandum items in the balance sheets. The unilateral repudiation of debt by a debtor is also not a transaction and is not recorded;

(g) that part of realised capital gains (or losses) which is redistributed to another sector, as, for example, capital gains redistributed by insurance companies to households. However, the counterpart transactions of transfers to general government of the proceeds of privatisation made indirectly (through a holding company for example) are recorded as financial transactions in equity and investment fund shares (F.5) and have no impact on the level of net lending/net borrowing of the general government;

(h) major payments in compensation for damage or injuries not covered by insurance policies (except payments by general government or by the rest of the world described in point (a)). The payments are awarded by courts of law or settled out of court. Examples are payments of compensation for damage caused by major explosions, oil spillages, the side-effects of drugs, etc.;

(i) extraordinary payments into social insurance funds made by employers (including government) or by government (as part of its social function), in so far as these payments are designed to increase the actuarial reserves of these funds. The accompanying adjustment from social insurance funds to households is also recorded as other capital transfers (D.99);

(j) when taxes and social contributions payable to the general government sector are recorded on the basis of assessments and declarations, the part unlikely to be collected is neutralised in the same accounting period. This is done by recording an 'other capital transfer' (D.99), as an entry under D.995, between general government and the relevant sectors. This D.995 flow is subdivided according to the coding of the different taxes and social contributions concerned;

(k) insurance settlements in the wake of a catastrophe: following a catastrophe, the total value of the claims related to the catastrophe, as obtained from insurance industry information, is recorded as a capital transfer from the insurance corporations to the policy holders. When information on claims related to the catastrophe cannot be provided by the insurance industry, the catastrophe-related claims are estimated as the difference between the actual claims and the adjusted claims in the period of the catastrophe;

(l) community built assets where responsibility for maintenance is then assumed by government.

4.166 Time of recording is determined as follows:

(a) other capital transfers in cash are recorded when the payment is due to be made;

(b) other capital transfers in kind are recorded when the ownership of the asset is transferred or the liability cancelled by the creditor.

4.167 Other capital transfers are shown among changes in liabilities and net worth in the capital account of sectors and of the rest of the world.

Employee stock options (ESOs)

4.168 A particular form of income in kind is the practice of an employer giving an employee the option to buy stocks (shares) at a specified price at some future date. An ESO is similar to a financial derivative and the employee may choose not to exercise the option, either because the share price is now lower than the price at which he can exercise the option or because he has left the employ of that employer and so forfeits his option.

4.169 Typically an employer informs his employees of the decision to make a stock option available at a given price (the strike price or exercise price) after a certain time under certain conditions (for example, that the employee is still in the enterprise's employ, or conditional on the performance of the enterprise). The time of recording of the employee stock option in the national accounts has to be carefully specified. The 'grant date' is when the option is provided to the employee, the 'vesting date' is the earliest date when the option can be exercised, and the 'exercise date' is when the option is actually exercised (or lapses).

4.170 The International Accounting Standards Board (IASB) accounting recommendations are that the enterprise derives a fair value for the options at grant date by taking the strike price of the shares at that time multiplied by the number of options expected to be exercisable at vesting date divided by the number of service years expected to be provided until the vesting date.

4.171 In the ESA, if there is neither an observable market price nor an estimate made by the corporation in line with the recommendations just given, the valuation of the options may be estimated using a stock options pricing model. Such models aim to capture two effects in the value of the option. The first effect is a projection of the amount by which the market price of the shares in question will exceed the strike price at the vesting date. The second effect allows for the expectation that the price will rise further between the vesting date and exercise date.

4.172 Before the option is exercised, the arrangement between the employer and employee has the nature of a financial derivative and is shown as such in the financial accounts of both parties.

4.173 An estimate of the value of the ESO is to be made at grant date. This amount must be included as part of compensation of employees spread over the period between the grant date and vesting date, if possible. If this is not possible, the value of the option has to be recorded at vesting date.

4.174 The costs of administering ESOs are borne by the employer and are treated as part of intermediate consumption just as any other administrative functions associated with compensation of employees.

4.175 Although the value of the stock option is treated as income, there is no investment income associated with ESOs.

4.176 In the financial account, the acquisition of ESOs by households matches the corresponding part of compensation of employees with a matching liability of the employer.

4.177 In principle, any change in value between the grant date and vesting date is to be treated as part of compensation of employees while any change in value between vesting date and exercise date is not treated as compensation of employees but as a holding gain or loss. In practice, it is most unlikely that estimates of the costs of ESOs to the employers are revised between grant date and exercise date. For pragmatic reasons, therefore, the whole of the increase between grant date and exercise date is treated as a holding gain or loss. An increase in value of the share price above the strike price is a holding gain for the employee and a holding loss for the employer and vice versa.

4.178 When an ESO is exercised, the entry in the balance sheet disappears and is replaced by the value of the stocks (shares) acquired. This change in classification takes place via transactions in the financial account and not via the other changes in the volume of assets account.

CHAPTER 5

Financial transactions

5.01 *Definition:* financial transactions (F) are transactions in financial assets (AF) and liabilities between resident institutional units, and between them and non-resident institutional units.

5.02 A financial transaction between institutional units is a simultaneous creation or liquidation of a financial asset and the counterpart liability, or a change in ownership of a financial asset, or an assumption of a liability.

General features of financial transactions

Financial assets, financial claims, and liabilities

5.03 *Definition:* financial assets consist of all financial claims, equity and the gold bullion component of monetary gold.

5.04 Financial assets are stores of value representing a benefit or series of benefits accruing to an economic owner by holding or using the assets over a period of time. They are a means of carrying forward values from one accounting period to another. Benefits are settled through payments, which are typically currency (AF.21) and transferable deposits (AF.22).

5.05 *Definition:* a financial claim is the right of a creditor to receive a payment or series of payments from a debtor.

Financial claims are financial assets that have corresponding liabilities. Equity and investment fund shares or units (AF.5) are treated as a financial asset with a corresponding liability even though the claim of the holder on the corporation is not a fixed amount.

5.06 *Definition:* liabilities are established when a debtor is obliged to provide a payment or a series of payments to a creditor.

5.07 The gold bullion component of monetary gold, held by monetary authorities as a reserve asset, is treated as a financial asset even if a holder does not have claims on other designated units. There is no matching liability for gold bullion.

Contingent assets and contingent liabilities

5.08 *Definition:* contingent assets and contingent liabilities are agreements whereby one party is obliged to provide a payment or series of payments to another unit only where certain specific conditions prevail.

As they do not give rise to unconditional obligations, contingent assets and contingent liabilities are not considered as financial assets and liabilities.

5.09 Contingent assets and contingent liabilities include:

(a) one-off guarantees of payment by third parties since payment is only required if the debtor defaults;

(b) loan commitments providing a guarantee that funds will be made available but no financial asset exists until funds are actually advanced;

(c) letters of credit which constitute promises to make a payment conditional upon the presentation of certain documents specified by a contract;

(d) lines of credit which are promises to make loans to a specified customer up to a specified limit;

(e) underwritten note issuance facilities (NIFs) providing a guarantee that a potential debtor will be able to sell short-term debt securities known as notes, and that the bank issuing the facility will take up any notes not sold on the market or will provide equivalent advances; and

(f) pension entitlements under unfunded government defined benefit employer pension schemes or social security pension funds. Such pension entitlements are recorded in the supplementary table on accrued-to-date pension entitlements in social insurance, and not in the core accounts.

5.10 Contingent assets and contingent liabilities do not include:

(a) reserves of insurance, pension and standardised guarantee schemes (AF.6);

(b) financial derivatives (AF.7) where the arrangements themselves have a market value because they are tradable or can be offset on the market.

5.11 Although contingent assets and contingent liabilities are not recorded in the accounts, they are important for policy and analysis, and information on them needs to be collected and presented as supplementary data. Even though no payments may turn out to be due for contingent assets and contingent liabilities, a high level of contingencies may indicate an undesirable level of risk on the part of those units offering them.

Box 5.1 —Treatment of guarantees in the system

B5.1.1. *Definition:* guarantees are arrangements whereby the guarantor undertakes to a lender that if a borrower defaults, the guarantor will make good the loss the lender would otherwise suffer.

Often a fee is payable for the provision of a guarantee.

B5.1.2. Three different types of guarantees are distinguished. These apply only to guarantees provided in the case of financial assets. No special treatment is proposed for guarantees in the form of manufacturers' warrantees or other forms of guarantee. The three types of guarantee are:

(a) guarantees provided by means of a financial derivative, such as a credit default swap. Such derivatives are based on the risk of default of reference financial assets and are not linked to individual loans or debt securities;

(b) standardised guarantees are issued in large numbers, usually for fairly small amounts. Examples are export credit guarantees or student loan guarantees. Even though the degree of probability of any one standardised guarantee being called is uncertain, the fact that there are many similar guarantees means that a reliable estimate of the number of calls under the guarantee can be made. Standardised guarantees are treated as giving rise to financial assets and not contingent assets;

(c) one-off guarantees, where the associated risk cannot be calculated with any degree of accuracy, due to a lack of comparable cases. The granting of a one-off guarantee is considered a contingent asset or a contingent liability and is not recorded as a financial asset or a liability.

Categories of financial assets and liabilities

5.12 Eight categories of financial assets are distinguished:

AF.1 Monetary gold and special drawing rights;

AF.2 Currency and deposits;

AF.3 Debt securities;

AF.4 Loans;

AF.5 Equity and investment fund shares or units;

AF.6 Insurance, pension and standardised guarantee schemes;

AF.7 Financial derivatives and employee stock options;

AF.8 Other accounts receivable/payable.

5.13 Each financial asset has a counterpart liability, with the exception of the gold bullion component of monetary gold held by monetary authorities as a reserve asset classified in the category monetary gold and special drawing rights (F.1). With this exception, eight categories of liabilities are distinguished corresponding to the categories of the counterpart financial assets.

5.14 The classification of financial transactions corresponds to the classification of financial assets and liabilities. Eight categories of financial transactions are distinguished relating to:

F.1 monetary gold and special drawing rights;

F.2 currency and deposits;

F.3 debt securities;

F.4 loans;

F.5 equity and investment fund shares or units;

F.6 insurance, pension and standardised guarantee schemes;

F.7 financial derivatives and employee stock options;

F.8 other accounts receivable/payable.

5.15 Given the symmetry of financial claims and liabilities, the term 'instrument' is used to relate to both the asset and the liability aspect of financial transactions. Its use does not imply an extension of the coverage of financial assets and liabilities by including off-balance sheet items which are sometimes described as financial instruments in monetary and financial statistics.

Balance sheets, financial account, and other flows

5.16 The financial assets held and the liabilities outstanding at a particular point in time are recorded in the balance sheet. Financial transactions result in changes between opening and closing balance sheets. However, changes between the opening balance sheet and the closing balance sheet are also due to other flows, which are not interactions between institutional units by mutual agreement. Other flows related to financial assets and liabilities are broken down into revaluations in financial assets and liabilities, and changes in the volume of financial assets and liabilities not due to financial transactions. Revaluations are recorded in the revaluation account and changes in volume in the other changes in the volume of assets account.

5.17 The financial account is the final account in the sequence of accounts that record transactions. The financial account does not have a balancing item that is carried forward to another account. The balancing item of the financial account, the net acquisitions of financial assets less net incurrence of liabilities, is net lending (+) or net borrowing (-) (B.9F).

5.18 The balancing item of the financial account is conceptually identical to the balancing item of the capital account. In practice, a discrepancy is usually found between them because they are calculated on the basis of different statistical data.

Valuation

5.19 Financial transactions are recorded at transaction values, that is, the values in national currency at which the financial assets and/or liabilities involved are created, liquidated, exchanged or assumed between institutional units, on the basis of commercial considerations.

5.20 Financial transactions and their financial or non-financial counterpart transactions are recorded at the same transaction value. There are three possibilities:

(a) the financial transaction gives rise to a payment in national currency: the transaction value is equal to the amount exchanged;

(b) the financial transaction is a transaction in foreign currency and the counterpart transaction is not a transaction in national currency: the transaction value is equal to the amount in national currency at the market rate prevailing when the payment takes place; and

(c) neither the financial transaction nor its counterpart transaction is a transaction in cash or via other means of payment: the transaction value is the current market value of the financial assets and/or liabilities involved.

5.21 The transaction value refers to a specific financial transaction and its counterpart transaction. In concept, the transaction value is to be distinguished from a value based on a price quoted on the market, a fair market price, or any price that is intended to express the generality of prices for a class of similar financial assets and/or liabilities. However, in cases where the counterpart transaction of a financial transaction is, for example, a transfer and therefore the financial transaction may be undertaken other than for purely commercial considerations, the transaction value is identified with the current market value of the financial assets and/or liabilities involved.

5.22 The transaction value does not include service charges, fees, commissions, or similar payments for services provided in carrying out the transactions; such items are to be recorded as payments for services. Taxes on financial transactions are also excluded and are treated as taxes on services within taxes on products. When a financial transaction involves a new issue of liabilities, the transaction value is equal to the amount of the liability incurred, excluding any prepaid interest. Similarly, when a liability is extinguished, the transaction value for both creditor and debtor must correspond to the reduction of the liability.

Net and gross recording

5.23 *Definition:* net recording of financial transactions means that acquisitions of financial assets are shown net of disposals of financial assets, and that incurrences of liabilities are shown net of repayments of liabilities.

Financial transactions may be represented net across financial assets with different characteristics and with different debtors or creditors, provided they are within the same category or subcategory.

5.24 *Definition:* gross recording of financial transactions means that acquisitions and disposals of financial assets are shown separately, as are incurrences and repayments of liabilities.

Gross recording of financial transactions shows the same amount of net lending and net borrowing as if financial transactions were recorded net.

Financial transactions are to be recorded gross in cases of detailed financial market analyses.

Consolidation

5.25 *Definition:* consolidation in the financial account refers to the process of offsetting transactions in financial assets for a given group of institutional units against the counterpart transactions in liabilities for the same group of institutional units.

Consolidation can be performed at the level of the total economy, of institutional sectors, and of subsectors. The financial account of the rest of the world is consolidated by definition since only transactions of the non-resident institutional units with resident institutional units are recorded.

5.26 Different levels of consolidation are appropriate for different types of analysis. For example, consolidation of the financial account for the total economy emphasises the economy's financial transactions with non-resident institutional units since all financial transactions between resident institutional units are netted on consolidation. Consolidation for sectors permits the tracing of overall financial transactions between sectors with net lending and those with net borrowing. Consolidation at the subsector level for financial corporations can provide much more detail on financial intermediation and allow, for example, the identification of monetary financial institutions' transactions with other financial corporations as well as with other resident sectors and with non-resident institutional units. Another area where consolidation can be instructive at the subsector level is within the general government sector, since transactions between the various subsectors of government are not eliminated.

5.27 As a rule, the accounting entries in the ESA 2010 are not consolidated, as a consolidated financial account requires information on the counterpart grouping of institutional units. This requires financial transaction data on a from-whom-to-whom basis. For example, the compilation of consolidated general government liabilities requires a distinction to be made, among the holders of general government liabilities, between general government and other institutional units.

Netting

5.28 *Definition:* netting is the consolidation at the level of a single institutional unit whereby accounting entries on both sides of the account for the same transaction item are offset against one another. Netting is to be avoided unless source data are lacking.

5.29 Various degrees of netting can be distinguished as transactions in liabilities are subtracted from transactions in financial assets for the same financial asset category or subcategory.

5.30 When a department of an institutional unit purchases bonds issued by another department of the same institutional unit, the financial account of the unit does not record the transaction as the acquisition of a claim by one department on another. The transaction is recorded as a redemption of liabilities rather than an acquisition of consolidating assets. Such financial instruments are viewed as netted. Netting is to be avoided if it is necessary to keep the financial instrument on both the asset side and the liability side to follow the legal presentation.

5.31 Netting may be unavoidable for transactions of an institutional unit in financial derivatives, where separate data on transactions in assets and liabilities are usually not available. It is appropriate to net these transactions because the value of a position in financial derivatives may switch sign, i.e. to change from an asset to a liability position, as the value of the instrument 'underlying' the derivative contract changes in relation to the price in the contract.

Accounting rules for financial transactions

5.32 Quadruple-entry is an accounting practice in which each transaction involving two institutional units is recorded twice by each unit. For example businesses exchanging goods for cash will result in entries in both the production account and the financial account for each unit. Quadruple-entry accounting ensures symmetry of reporting by the institutional units involved, and so consistency in the accounts.

5.33 A financial transaction always has a counterpart transaction. This counterpart may be another financial transaction or a non-financial transaction.

5.34 Where a transaction and its counterpart are both financial transactions, they change the portfolio of financial assets and liabilities and they may change the totals of both financial assets and liabilities of the institutional units, but they do not change net lending/net borrowing or net worth.

5.35 The counterpart of a financial transaction may be a non-financial transaction such as a transaction in products, a distributive transaction, or a transaction in non-financial non-produced assets. Where the counterpart transaction of a financial transaction is not a financial transaction, net lending/net borrowing of the institutional units will change.

A financial transaction with a current or a capital transfer as counterpart

5.36 The counterpart transaction of a financial transaction may be a transfer. In this case, the financial transaction involves a change in ownership of a financial asset, or an assumption of a liability as debtor, known as debt assumption, or the simultaneous liquidation of a financial asset and the counterpart liability, known as debt cancellation or debt forgiveness. Debt assumption and debt cancellation are capital transfers (D.9) and recorded in the capital account.

5.37 If the owner of a quasi-corporation assumes liabilities from or cancels financial claims against the quasi-corporation, the counterpart transaction of debt assumption or debt cancellation is a transaction in equity (F.51). However, if the operation is intended to cover accumulated losses or an exceptionally large loss, or is made in the context of persistent losses, then the operation is classified as a non-financial transaction — a capital transfer or a current transfer.

5.38 If government cancels or assumes debt from a public corporation which disappears as an institutional unit in the system, no transaction is recorded in the capital account or the financial account. In this case a flow is recorded in the other changes in the volume of assets account.

5.39 If government cancels or assumes debt from a public corporation as part of a process of privatisation to be achieved in the short term, the counterpart transaction is a transaction in equity (F.51) up to the total of privatisation receipts. In other words, the government, by cancelling or assuming debt of the public corporation, is considered to be temporarily increasing its equity in the corporation. Privatisation means the giving up of control over that public corporation by the disposal of equity. Such a cancellation of debt or debt assumption leads to an increase of the own funds of the public corporation, even in the absence of an issue of equity.

5.40 The writing-off or writing-down of bad debts by creditors and the unilateral cancellation of a liability by a debtor, known as debt repudiation, are not transactions because they do not involve interactions between institutional units by mutual agreement. The writing-off or writing-down of bad debts by creditors is recorded in the other changes in the volume of assets account.

A financial transaction with property income as counterpart

5.41 The counterpart transaction of a financial transaction may be property income.

5.42 Interest (D.41) is receivable by creditors and payable by debtors of certain kinds of financial claims classified in the monetary gold and special drawing rights (AF.1), currency and deposits (AF.2), debt securities (AF.3), loans (AF.4) and other accounts receivable/payable (AF.8) categories.

5.43 Interest is recorded as accruing continuously over time to the creditor on the amount of principal outstanding. The counterpart transaction of an entry in interest (D.41) is a financial transaction creating a financial claim of the creditor against the debtor. The accumulation of interest is recorded in the financial account with the financial instrument to which it relates. The effect of this financial transaction is that interest is reinvested. The actual payment of interest is not recorded as interest (D.41), but as a transaction in currency and deposits (F.2) matched by an equivalent repayment of the relevant asset reducing the net financial claim of the creditor against the debtor.

5.44 When accrued interest is not paid when due, it gives rise to interest arrears. As it is the accrued interest which is recorded, interest arrears do not change the total of financial assets or liabilities.

5.45 Income of corporations comprises dividends (D.421), withdrawals of income from quasi-corporations (D.422), reinvested earnings on foreign direct investment, (D.43) and retained earnings of domestic enterprises. The effect of the counterpart financial transaction in the case of reinvested earnings is that the property income is reinvested in the direct investment enterprise.

5.46 Dividends are recorded as investment income at the time the shares start to be quoted ex-dividend. This also applies to withdrawals of income from quasi-corporations. A different recording is made for extraordinarily large dividends or withdrawals that are out of line with recent experience of the amount of income available for distribution to the owners of the corporation. Such excess distribution is recorded as a withdrawal of equity in the financial account and not as investment income.

5.47 Property income receivable by investment funds, net of a part of management costs, and assigned to shareholders, even though it is not distributed, is recorded in property income with a counterpart entry in the financial account under investment fund shares or units. The effect is that the income assigned to shareholders but not distributed is treated as reinvested in the fund.

5.48 Investment income is attributed to insurance policy holders (D.44), holders of pension entitlements, and holders of investment fund shares. Regardless of the amount actually distributed by the insurance corporation, pension fund or investment fund, the full amount of investment income received by the insurance corporation or fund is recorded as distributed to the policy holders or holders of shares. The amount not actually distributed is recorded in the financial account as reinvestment.

Time of recording

5.49 Financial transactions and their counterpart transactions are recorded at the same point in time.

5.50 When the counterpart of a financial transaction is a non-financial transaction, both are recorded at the time the non-financial transaction takes place. For example, when sales of goods or services give rise to a trade credit, this financial transaction is to be recorded when the entries are made in the relevant non-financial account, when the ownership of the goods is transferred or when the service is provided.

5.51 When the counterpart of a financial transaction is a financial transaction, there are three possibilities:

(a) both financial transactions are transactions in cash or other means of payment: they are recorded at the time the first payment is made;

(b) only one of the two financial transactions is a transaction in cash or other means of payment: they are recorded at the time payment is made; and

(c) neither of the two financial transactions is a transaction in cash or other means of payment: they are recorded at the time the first financial transaction takes place.

A from-whom-to-whom financial account

5.52 The from-whom-to-whom financial account or the financial account by debtor/creditor is an extension of the non-consolidated financial account. It is a three dimensional presentation of financial transactions where both parties to a transaction are shown, as well as the nature of the financial instrument being transacted.

This presentation provides information on debtor/creditor relationships and is consistent with a from-whom-to-whom financial balance sheet. No information is provided on the institutional units to whom financial assets were sold or from whom financial assets were bought. This also applies to corresponding transactions in liabilities. The from-whom-to-whom financial account is also known as the flow of funds matrix.

5.53 Based on the principle of quadruple-entry accounting a from-whom-to-whom financial account has three dimensions: the financial instrument category, the sector of the debtor, and the sector of the creditor. A from-whom-to-whom financial account requires three-dimensional tables covering the breakdowns by financial instrument, debtor and creditor. Such tables show the financial transactions cross-classified by debtor sector and creditor sector as shown in Table 5.1.

5.54 The table for the financial instrument debt securities category shows that, as a result of transactions in the reference period, the debt securities acquired, net of disposals, by households and by non-profit institutions serving households (275) represent claims on non-financial corporations (65), financial corporations (43), general government (124), and the rest of the world (43). The table shows that, as a result of transactions in the reference period, non-financial corporations incurred, net of redemptions, liabilities in the form of debt securities of 147: their liabilities in this form to other non-financial corporations increased by 30, to financial corporations by 23, to general government by 5, to households and non-profit institutions serving households by 65 and to the rest of the world by 24. No debt securities were issued by households and non-profit institutions serving households. Because of the consolidated presentation of the rest of the world, no transactions are shown between non-resident institutional units. Similar tables can be compiled for all financial instrument categories.

Table 5.1 — A from-whom-to-whom financial account for debt securities

Debtor sector / Creditor sector		Net incurrence of debt securities by						
		Non-financial corporations	Financial corporations	General government	Households and non-profit institutions serving households	National economy	Rest of the world	Total
Net acquisition of debt securities by	Non-financial corporations	30	11	67		108	34	142
	Financial corporations	23	22	25		70	12	82
	General government	5	2	6		13	19	32
	Households and non-profit institutions serving households	65	43	124		232	43	275
	National economy	123	78	222		423	108	531
	Rest of the world	24	28	54		106		106
	Total	147	106	276		529	108	637

5.55 The from-whom-to-whom financial account allows analysis of who is financing whom, to what amount and by which financial asset. It provides the answers to questions such as:

(a) What are the counterpart sectors for the financial assets acquired net, or for the liabilities incurred net by an institutional sector?

(b) Which are the corporations with which the general government sector participates?

(c) What amounts of debt securities do resident sectors and the rest of the world acquire (net of disposals), which have been issued (net of redemptions) by general government, financial or non-financial corporations, and the rest of the world?

Classification of financial transactions by categories in detail

The following definitions and descriptions are of financial instruments. When a transaction is being recorded, the code used is F. When the underlying stock level or position of an asset or liability is being recorded, then the coding is AF.

Monetary gold and special drawing rights (F.1)

5.56 The monetary gold and special drawing rights (SDRs) (F.1) category consists of two subcategories:

(a) monetary gold (F.11); and

(b) special drawing rights (SDRs) (F.12).

Monetary gold (F.11)

5.57 *Definition:* monetary gold is gold to which monetary authorities have title and which is held in reserve assets.

It includes gold bullion, and unallocated gold accounts with non-residents that give title to claim the delivery of gold.

5.58 Monetary authorities include the central bank and central government institutions which carry out operations usually attributed to the central bank. Such operations include the issue of currency, maintenance and management of reserve assets and the operation of exchange stabilisation funds.

5.59 Being subject to the effective control of monetary authorities means that:

(a) the resident unit can transact in these claims on non-residents only on the terms specified by the monetary authorities or with their express approval;

(b) the monetary authorities have access on demand to these claims on non-residents to meet balance of payments financing needs and other related purposes; and

(c) there is a prior law or other binding arrangement confirming points (a) and (b) above.

5.60 All monetary gold is included in reserve assets or is held by international financial organisations. Its components are:

(a) gold bullion (including monetary gold held in allocated gold accounts); and

(b) unallocated gold accounts with non-residents.

5.61 Gold bullion included in monetary gold is the only financial asset for which there is no counterpart liability. It takes the form of coins, ingots, or bars with a purity of at least 995 parts per 1 000. Gold bullion not held as reserve assets is a non-financial asset and is included in non-monetary gold.

5.62 Allocated gold accounts provide ownership of a specific piece of gold. The ownership of the gold remains with the entity placing it for safe custody. These accounts typically offer purchasing, storing, and selling facilities. When held as reserve assets, allocated gold accounts are classified as monetary gold, and so as a financial asset. When not held as reserve assets, allocated gold accounts represent ownership of a commodity, namely non-monetary gold.

5.63 In contrast to allocated gold accounts, unallocated gold accounts represent a claim against the account operator to deliver gold. When held as reserve assets, unallocated gold accounts are classified as monetary gold, and so as a financial asset. Unallocated gold accounts not held as reserve assets are classified as deposits.

5.64 Transactions in monetary gold consist predominantly of purchases and sales of monetary gold among monetary authorities or certain international financial organisations. There cannot be any transactions in monetary gold involving institutional units other than those. Purchases of monetary gold are recorded in the financial accounts of monetary authorities as an increase in financial assets and sales are recorded as a decrease in financial assets. The counterpart entries are recorded respectively as a decrease in financial assets or an increase in financial assets of the rest of the world.

5.65 If monetary authorities add non-monetary gold to their holdings of monetary gold (for example, by purchasing gold on the market), or release monetary gold from their holdings for non-monetary purposes (for example, by selling it on the market), they are deemed to have monetised or demonetised gold, respectively. Monetisation or demonetisation of gold does not give rise to entries in the financial account, but to entries in the other changes in the volume of assets account as a change in classification of assets and liabilities, i.e. the reclassification of gold from a valuable (AN.13) to monetary gold (AF.11) (paragraphs 6.22-6.24). Demonetisation of gold is reclassification of monetary gold to a valuable.

5.66 Deposits, loans, and securities denominated in gold are treated as financial assets other than monetary gold and are classified along with similar financial assets in foreign currency in the appropriate category. Gold swaps are forms of securities repurchase agreements (repos) involving either monetary gold or non-monetary gold. They imply the exchange of gold for a deposit with an agreement that the transaction will be reversed at an agreed future date at an agreed gold price. Following the general practice for the recording of reverse transactions, the gold taker will not record the gold on its balance sheet, while the gold provider will not remove the gold from its balance sheet. Gold swaps are recorded as collateralised loans by both parties, where the collateral is gold. Monetary gold swaps are undertaken between monetary authorities or between monetary authorities and other parties, while non-monetary gold swaps are similar transactions without the involvement of monetary authorities.

5.67 Gold loans consist of the delivery of gold for a given time period. As for other reverse transactions, legal ownership of the gold is transferred, but the risks and benefits of changes in the gold price remain with the lender. Gold borrowers often use these transactions to cover their sales to third parties in periods of gold shortage. A fee, determined by the value of the underlying asset and the duration of the reverse transaction, is paid to the original owner for the use of the gold.

5.68 Monetary gold is a financial asset; the fees for gold loans are accordingly payments for putting a financial asset at the disposal of another institutional unit. Fees associated with loans of monetary gold are treated as interest. This also applies as a simplifying convention to fees paid on loans of non-monetary gold.

SDRs (F.12)

5.69 *Definition:* SDRs are international reserve assets created by the International Monetary Fund (IMF) and which are allocated to its members to supplement existing reserve assets.

5.70 The SDR Department of the IMF manages reserve assets by allocating SDRs among member countries of the IMF and certain international agencies, collectively known as the participants.

5.71 The creation of SDRs through their allocation, and extinguishing them through their cancellations, are transactions. Allocations of SDRs are recorded gross as acquisition of an asset in the financial accounts of the monetary authorities of the individual participant, and as an incurrence of a liability by the rest of the world.

5.72 SDRs are held exclusively by official holders, which are central banks and certain international agencies, and are transferable among participants and other official holders. SDR holdings represent each holder's assured and unconditional right to obtain other reserve assets, especially foreign exchange, from other IMF members.

5.73 SDRs are assets with matching liabilities but the assets represent claims on the participants collectively and not on the IMF. A participant may sell some or all of its SDR holdings to another participant and receive other reserve assets, particularly foreign exchange, in return.

Currency and deposits (F.2)

5.74 *Definition:* currency and deposits are currency in circulation and deposits, both in national currency and in foreign currencies.

5.75 There are three sub-categories of financial transaction in relation to currency and deposits:

(a) currency (F.21);

(b) transferable deposits (F.22); and

(c) other deposits (F.29).

Currency (F.21)

5.76 *Definition:* currency is notes and coins that are issued or authorised by monetary authorities.

5.77 Currency includes:

(a) notes and coins issued by resident monetary authorities as national currency in circulation held by residents and non-residents; and

(b) notes and coins issued by non-resident monetary authorities as foreign currencies in circulation and held by residents.

5.78 Currency does not include:

(a) notes and coins that are not in circulation, for example, a central bank's stock of its own notes or emergency stockpiles of notes; and

(b) commemorative coins that are not commonly used to make payments. They are classified as valuables.

Box 5.2 — Currency issued by the Eurosystem

B5.2.1. Euro banknotes and coins issued by the Eurosystem are the domestic currency of the Member States in the euro area. Although treated as domestic currency, holdings of euro currency by residents of each participating Member State are liabilities of the resident national central bank only to the extent of its notional share in the total issue, based on its share in the capital of the ECB. A consequence is that, in the euro area, from a national perspective, part of residents' holdings of domestic currency may be a financial claim on non-residents.

B5.2.2. Currency issued by the Eurosystem includes notes and coins. Notes are issued by the Eurosystem; coins are issued by central governments in the euro area, although, by convention, they are treated as liabilities of the national central banks which as a counterpart hold a notional claim on general government. Euro banknotes and coins may be held by euro area residents or by non-residents of the euro area.

Deposits (F.22 and F.29)

5.79 *Definition:* deposits are standardised, non-negotiable contracts with the public at large, offered by deposit-taking corporations and, in some cases, by central government as debtors, and allowing the placement and the later withdrawal of the principal amount by the creditor. Deposits usually involve the debtor giving back the full principal amount to the investor.

Transferable deposits (F.22)

5.80 *Definition:* transferable deposits are deposits exchangeable for currency on demand, at par, and which are directly usable for making payments by cheque, draft, giro order, direct debit/credit, or other direct payment facilities, without penalty or restriction.

5.81 Transferable deposits predominantly represent liabilities of resident deposit-taking corporations, in some cases of central government, and of non-resident institutional units. Transferable deposits include any of the following:

(a) inter-bank positions between monetary financial institutions;

(b) deposits held with the central bank by deposit-taking corporations in excess of the amount of reserves that they are obliged to hold, and which they are able to use without notice or restriction;

(c) deposits which other monetary financial institutions incur vis-à-vis the central bank in the form of unallocated gold accounts which are not monetary gold, and also corresponding deposits in the form of precious metal accounts;

(d) foreign currency deposits under swap arrangements;

(e) the reserve position with the IMF forming the 'reserve tranche', i.e. the SDR or foreign currency amounts that a member country may draw from the IMF at short notice, and other claims on the IMF that are readily available to the member country, including the reporting country's lending to the IMF under the general arrangements to borrow (GAB) and the new arrangements to borrow (NAB).

5.82 Transferable deposit accounts may have overdraft facilities. If the account is overdrawn, the withdrawal to zero is the withdrawal of a deposit, and the amount of the overdraft is the granting of a loan.

5.83 All resident sectors and the rest of the world may hold transferable deposits.

5.84 Transferable deposits may be divided by currency into transferable deposits denominated in domestic currency and in foreign currencies.

Other deposits (F.29)

5.85 *Definition:* other deposits are deposits other than transferable deposits. Other deposits cannot be used to make payments except on maturity or after an agreed period of notice, and they are not exchangeable for currency or for transferable deposits without some significant restriction or penalty.

5.86 Other deposits include:

(a) time deposits, which are deposits not immediately disposable, but disposable with an agreed maturity. Their availability is subject to a fixed term or they are redeemable at notice of withdrawal. They also include deposits with the central bank held by deposit-taking corporations as compulsory reserves to the extent that the depositors cannot use them without notice or restriction;

(b) savings deposits, savings books, non-negotiable savings certificates or non-negotiable certificates of deposit;

(c) deposits resulting from a savings scheme or contract. These deposits often involve an obligation on the part of the depositor to make regular payments over a given period, and the capital paid and interest accrued do not become available until a fixed term has elapsed. These deposits are sometimes combined with the issue, at the end of the savings period, of loans which are proportionate to the accumulated savings, for the purpose of buying or building a dwelling;

(d) evidence of deposits issued by savings and loan associations, building societies, credit unions etc., sometimes called shares, which are redeemable on demand or at relatively short notice, but which are not transferable;

(e) repayable margin payments related to financial derivatives which are liabilities of monetary financial institutions;

(f) short-term repurchase agreements (repos) which are liabilities of monetary financial institutions; and

(g) liabilities to the IMF that are components of international reserves and are not evidenced by loans; they consist of use of Fund credit within the IMF's General Resources Account. This item measures the amount of a member's currency with the IMF that the member is obligated to repurchase.

5.87 Other deposits do not include negotiable certificates of deposit and negotiable savings certificates. They are classified under debt securities (AF.3).

5.88 Other deposits may be divided by currency into other deposits denominated in domestic currency and other deposits denominated in foreign currencies.

Debt securities (F.3)

5.89 *Definition:* debt securities are negotiable financial instruments serving as evidence of debt.

Main features of debt securities

5.90 Debt securities have the following characteristics:

(a) an issue date on which the debt security is issued;

(b) an issue price at which investors buy the debt securities when first issued;

(c) a redemption date or maturity date on which the final contractually scheduled repayment of the principal is due;

(d) a redemption price or face value, which is the amount to be paid by the issuer to the holder at maturity;

(e) an original maturity, which is the period from the issue date until the final contractually scheduled payment;

(f) a remaining or residual maturity, which is the period from the reference date until the final contractually scheduled payment;

(g) a coupon rate that the issuer pays to holders of the debt securities; the coupon may be fixed throughout the life of the debt security or vary with inflation, interest rates, or asset prices. Bills and zero-coupon debt securities offer no coupon interest;

(h) coupon dates, on which the issuer pays the coupon to the securities' holders;

(i) the issue price, redemption price, and coupon rate may be denominated (or settled) in either national currency or foreign currencies; and

(j) the credit rating of debt securities, which assesses the credit worthiness of individual debt securities issues. Rating categories are assigned by recognised agencies.

With regard to point (c) in the first subparagraph, the maturity date may coincide with the conversion of a debt security into a share. In this context, convertibility means that the holder may exchange a debt security for the issuer's common equity. Exchangeability means that the holder may exchange the debt security for shares of a corporation other than the issuer. Perpetual securities, which have no stated maturity date, are classified as debt securities.

5.91 Debt securities include financial assets and liabilities which may be described according to different classifications — by maturity, holding and issuing sector and subsector, currency, and type of interest rate.

Classification by original maturity and currency

5.92 Transactions in debt securities are divided by original maturity into two subcategories:

(a) short-term debt securities (F.31); and

(b) long-term debt securities (F.32).

5.93 Debt securities may be denominated in national currency or in foreign currencies. A further breakdown of debt securities denominated in various foreign currencies may be appropriate and will vary depending on the relative importance of the individual foreign currencies for an economy.

5.94 Debt securities with both principal and coupon linked to a foreign currency are classified as denominated in that foreign currency.

Classification by type of interest rate

5.95 Debt securities may be classified by type of interest rate. Three groups of debt securities are distinguished:

(a) fixed interest rate debt securities;

(b) variable interest rate debt securities; and

(c) mixed interest rate debt securities.

Fixed interest rate debt securities

5.96 Fixed interest rate debt securities cover:

(a) plain debt securities, which are issued and redeemed at par value;

(b) debt securities issued at discount or at premium to their par value. Examples are treasury bills, commercial paper, promissory notes, bill acceptances, bill endorsements, and certificates of deposit;

(c) deep-discounted bonds having small interest payments and issued at a considerable discount to par value;

(d) zero-coupon bonds, which are single-payment debt securities with no coupon payments. The bond is sold at a discount from par value, and the principal is repaid at maturity or sometimes redeemed in tranches. Zero-coupon bonds may be created from fixed rate debt securities by 'stripping off' the coupons, that is, by separating the coupons from the final principal payment of the security and trading them independently;

(e) Separate Trading of Registered Interest and Principal Securities (STRIPS), or stripped debt securities, which are securities whose interest and principal payment portions have been separated, or 'stripped', and may then be sold separately;

(f) perpetual, callable, and puttable debt securities, and debt securities with sinking fund provision;

(g) convertible bonds, which may, at the option of the holder, be converted into the equity of the issuer, at which point they are classified as shares; and

(h) exchangeable bonds, with an embedded option to exchange the security for a share in a corporation other than the issuer, usually a subsidiary or company in which the issuer owns a stake, at some future date and under agreed conditions.

5.97 Fixed interest rate debt securities also include other debt securities like equity warrant bonds, subordinated bonds, non-participating preference shares that pay a fixed income but do not provide for participation in the distribution of the residual value of a corporation on dissolution, and stapled instruments.

Variable interest rate debt securities

5.98 Variable interest rate debt securities have their interest and/or principal payments linked to:

(a) a general price index for goods and services (such as the consumer price index);

(b) an interest rate; or

(c) an asset price.

5.99 Variable interest rate debt securities are usually classified as long-term debt securities, unless they have an original maturity of one year or less.

5.100 Inflation-linked and asset price-linked debt securities include those debt securities issued as inflation-linked bonds and as commodity-linked bonds. The coupons and/or the redemption value of a commodity-linked bond are linked to the price of a commodity. Debt securities, interest on which is linked to the credit rating of another borrower, are classified as index-linked debt securities, as credit ratings do not change in a continuous manner in response to market conditions.

5.101 For interest rate-linked debt securities, the contractual nominal interest and/or the redemption value are variable in terms of national currency. At the date of issue, the issuer cannot know the value of interest and principal repayments.

Mixed interest rate debt securities

5.102 Mixed interest rate debt securities have both a fixed and a variable coupon rate over their life and are classified as variable interest rate debt securities. They cover debt securities that have:

(a) a fixed coupon and a variable coupon at the same time;

(b) a fixed or a variable coupon until a reference point and then a variable or a fixed coupon from that reference point to the maturity date; or

(c) coupon payments that are pre-fixed over the life of the debt securities, but are not constant over time. They are called stepped debt securities.

Private placements

5.103 Debt securities also include private placements. Private placements involve an issuer selling debt securities directly to a small number of investors. The credit worthiness of the issuers of these debt securities are typically not assessed by credit rating agencies, and the securities are generally not resold or repriced, so the secondary market is shallow. However, most private placements meet the criterion of negotiability and are classified as debt securities.

Securitisation

5.104 *Definition:* securitisation is the issuance of debt securities for which coupon or principal payments are backed by specified assets or by future income streams. A variety of assets or future income streams may be securitised including, among others, residential and commercial mortgage loans; consumer loans; corporate loans, government loans; insurance contracts; credit derivatives; and future revenue.

5.105 Securitisation of assets or of future income streams is an important financial innovation that has led to the creation and extensive use of new financial corporations to facilitate the creation, marketing, and issuance of debt securities. Securitisation has been driven by different considerations. For corporations, these include: cheaper funding than is available through banking facilities; the reduction in regulatory capital requirements; the transfer of various types of risk like credit risk or insurance risk; and the diversification of funding sources.

5.106 Securitisation schemes vary within and across debt securities markets. These schemes can be grouped into two broad types:

(a) a financial corporation engaging in the securitisation of assets and a transfer of the assets providing collateral from the original holder, known as a true-sale; and

(b) securitisation schemes involving a financial corporation engaged in the securitisation of assets and a transfer of credit risk only, using credit default swaps (CDS) — the original owner retains the assets, but passes on the credit risk. This is known as synthetic securitisation.

5.107 With regard to the scheme referred to in point (a) of paragraph 5.106 a securitisation corporation is created to hold securitised assets or other assets that have been securitised by the original holder, and issue debt securities collateralised by those assets.

5.108 It is essential to establish, in particular, whether the financial corporation engaged in the securitisation of assets actively manages its portfolio by issuing debt securities, rather than simply acting as a trust that passively manages assets or holds debt securities. Where the financial corporation is the legal owner of a portfolio of assets, issues debt securities that present an interest in the portfolio, has a full set of accounts, it is acting as a financial intermediary classified in other financial intermediaries. Financial corporations engaged in the securitisation of assets are distinguished from entities that are created solely to hold specific portfolios of financial assets and liabilities. These entities are combined with their parent corporation, if resident in the same country as the parent. However, as non-resident entities they are treated as separate institutional units and are classified as captive financial institutions.

5.109 In the case of the securitisation scheme referred to in point (b) of paragraph 5.106, the original owner of the assets, or protection buyer, by means of credit default swaps (CDS), transfers the credit risk related to a pool of diversified reference assets to a securitisation corporation but retains the assets themselves. The proceeds from the issue of debt securities are placed in a deposit or in another safe investment such as AAA bonds, and the interest accrued on the deposit, together with the premium from the CDS, finances the interest on the debt securities issued. If a default occurs, the principal owed to the holders of the ABS is reduced — with junior tranches getting the first 'hit' etc. Coupon and principal payments may also be redirected to the original collateral owner from investors in the debt securities to cover default losses.

5.110 An asset-backed security (ABS) is a debt security whose principal and/or interest is solely payable from the cash flows produced by a specified pool of financial or non-financial assets.

Covered bonds

5.111 *Definition:* covered bonds are debt securities issued by a financial corporation, or fully guaranteed by a financial corporation. In case of default of the issuing or guarantor financial corporation, bond holders have a priority claim on the cover pool, in addition to their ordinary claim on the financial corporation.

Loans (F.4)

5.112 *Definition:* loans are created when creditors lend funds to debtors.

Main features of loans

5.113 Loans are characterised by the following features:

(a) the conditions governing a loan are either fixed by the financial corporation granting the loan or agreed by the lender and the borrower directly or through a broker;

(b) the initiative to take out a loan normally lies with the borrower; and

(c) a loan is an unconditional debt to the creditor which has to be repaid at maturity and which is interest-bearing.

5.114 Loans can be financial assets or liabilities of all resident sectors and the rest of the world. Deposit taking corporations normally record short-term liabilities as deposits, not as loans.

Classification of loans by original maturity, currency, and purpose of lending

5.115 Transactions in loans can be categorised into two types of original maturity:

(a) short-term loans (F.41) with a short-term original maturity, including loans repayable on demand; and

(b) long-term loans (F.42) with a long-term original maturity.

5.116 For analytical purposes, loans may be subcategorised further as follows:

(a) loans denominated in national currency; and

(b) loans denominated in foreign currencies.

For households, a useful sub-categorisation is as follows:

(a) loans for consumption;

(b) loans for house purchases; and

(c) other loans.

Distinction between transactions in loans and transactions in deposits

5.117 The distinction between transactions in loans (F.4) and transactions in deposits (F.22) is that a debtor offers a standardised non-negotiable contract in the case of a loan, but not in the case of a deposit.

5.118 Short-term loans granted to deposit taking corporations are classified as transferable deposits or as other deposits, and short-term loans accepted by institutional units other than deposit-taking corporations are classified as short-term loans.

5.119 Placements of funds between deposit-taking corporations are always recorded as deposits.

Distinction between transactions in loans and transactions in debt securities

5.120 The distinction between transactions in loans (F.4) and transactions in debt securities (F.3) is that loans are non-negotiable financial instruments while debt securities are negotiable financial instruments.

5.121 In most cases, loans are evidenced by a single document and transactions in loans are carried out between one creditor and one debtor. By contrast, debt security issues consist of a large number of identical documents, each evidencing a round sum, which together form the total amount borrowed.

5.122 A secondary market in loans exists. In cases where loans become negotiable on an organised market, they are to be reclassified from loans to debt securities, provided that there is evidence of secondary market trading, including the existence of market makers, and frequent quotation of the financial asset, such as provided by bid-offer spreads. An explicit conversion of the original loan is normally involved.

5.123 Standardised loans are offered in most cases by financial corporations and they are often granted to households. Financial corporations determine the conditions and households may only choose either to accept or refuse. The conditions of non-standardised loans however are usually the result of negotiations between the creditor and the debtor. This is an important criterion which facilitates a distinction between non-standardised loans and debt securities. In the case of public security issues, the issue conditions are determined by the borrower, possibly after consulting the bank/lead-manager-bank. In the case of private security issues, however, the creditor and the debtor negotiate the issue conditions.

Distinction between transactions in loans, trade credit and trade bills

5.124 Trade credit is credit extended directly by the suppliers of goods and services to their customers. Trade credit arises when payment for goods and services is not made at the same time as the change in ownership of a good or the provision of a service.

5.125 Trade credit is distinguished from loans to finance trade, which are classified as loans. Trade bills drawn on a customer by the supplier of goods and services, which are subsequently discounted by the supplier with a financial corporation, become a claim by a third party on the customer.

Securities lending and repurchase agreements

5.126 *Definition:* securities lending is the temporary transfer of securities by the lender to the borrower. The securities borrower may be required to provide assets as collateral to the securities lender in the form of cash or securities. Legal title passes on both sides of the transaction so that borrowed securities and collateral can be sold or 'on-lent'.

5.127 *Definition:* a securities repurchase agreement is an arrangement involving the provision of securities like debt securities or shares in exchange for cash or other means of payment, with a commitment to repurchase the same or similar securities at a fixed price. The commitment to repurchase may be either on a specified future date or an 'open' maturity.

5.128 Securities lending with cash collateral and repurchase agreements (repos) are different terms for financial arrangements with the same economic effects, namely those of a secured loan, as both involve the provision of securities as collateral for a loan or a deposit, where a deposit-taking corporation sells the securities under such a financial arrangement. The different features of the two arrangements are shown in Table 5.2.

Table 5.2 — Main features of securities lending and repurchase agreements

Feature	Securities lending		Repurchase agreements	
	Cash collateral	Without cash collateral	Specific securities	General collateral
Formal method of exchange	Lending of securities with an agreement by the borrower to deliver it back to the lender		Sale of securities and commitment to repurchase them under terms of master agreement	
Form of exchange	Securities versus cash	Securities versus other collateral (if any)	Securities versus cash	Cash versus securities
Return is paid to the supplier of	Cash collateral (the securities borrower)	Securities (not collateral securities) (the securities lender)	Cash	Cash
Return repayable as	Fee	Fee	Repo rate	Repo rate

5.129 The securities provided under securities lending and repurchase agreements are treated as not having changed economic ownership because the lender is still the beneficiary of the income yield by the security, and subject to the risks or benefits of any change in the price of the security.

5.130 Neither the supply and receipt of funds under a securities repurchase agreement, nor securities lending with cash collateral, involve any new issuance of debt securities. Such provision of funds to institutional units other than monetary financial institutions is treated as loans; for deposit taking corporations, it is treated as deposits.

5.131 If a securities lending does not involve the supply of cash, that is, if there is an exchange of one security for another, or if one party supplies a security without collateral, there is no transaction in loans, deposits or securities.

5.132 Marginal calls in cash under a repo are classified as loans.

5.133 Gold swaps are similar to securities repurchase agreements except that the collateral is gold. They involve an exchange of gold for foreign exchange deposits with an agreement that the transaction be reversed at an agreed future date at an agreed gold price. The transaction is recorded as a collateralised loan or a deposit.

Financial leases

5.134 *Definition:* a financial lease is a contract under which the lessor as legal owner of an asset conveys the risks and benefits of ownership of the asset to the lessee. Under a financial lease, the lessor is deemed to make, to the lessee, a loan with which the lessee acquires the asset. Thereafter the leased asset is shown on the balance sheet of the lessee and not the lessor; the corresponding loan is shown as an asset of the lessor and a liability of the lessee.

5.135 Financial leases may be distinguished from other kinds of leases because the risks and rewards of ownership are transferred from the legal owner of the good to the user of the good. Other kinds of leases are (i) operating lease; and (ii) resource lease. Contracts, leases and licenses, as defined in Chapter 15, can be considered as leases as well.

Other types of loans

5.136 The loans category includes the following:

(a) overdrafts on transferable deposit accounts, where the amount overdrawn is not treated as a negative transferable deposit;

(b) overdrafts on other current accounts, for example, intra-group balances between non-financial corporations and their subsidiaries, but excluding balances which are liabilities of monetary financial institutions classified in the deposit sub-categories;

(c) financial claims of employees because of participation in the corporation's profit;

(d) repayable margin payments related to financial derivatives which are liabilities of institutional units other than monetary financial institutions;

(e) loans which are counterparts of bankers' acceptances;

(f) mortgage loans;

(g) consumer credit;

(h) revolving credits;

(i) instalment loans;

(j) loans paid as a guarantee for fulfilling certain obligations;

(k) deposit guarantees as financial claims of reinsurance corporations on ceding corporations;

(l) financial claims on the IMF evidenced by loans in the General Resources Account, including lending under the General Arrangements to Borrow (GAB) and the New Arrangements to Borrow (NAB); and

(m) liabilities to the IMF evidenced by IMF credit or Poverty Reduction and Growth Facility (PRGF) loans.

5.137 The special case of non-performing loans is discussed in Chapter 7.

Financial assets excluded from the category of loans

5.138 The category of loans does not include:

(a) other accounts receivable/payable (AF.8), including trade credits and advances (AF.81); and

(b) financial assets or liabilities arising from the ownership of immovable assets, such as land and structures, by non-residents. They are classified in other equity (AF.519).

Equity and investment fund shares or units (F.5)

5.139 *Definition:* equity and investment fund shares or units are residual claims on the assets of the institutional units that issued the shares or units.

5.140 Equity and investment fund shares are divided into two subcategories:

(a) equity (F.51); and

(b) investment fund shares or units (F.52).

Equity (F.51)

5.141 *Definition:* equity is a financial asset that is a claim on the residual value of a corporation, after all other claims have been met.

5.142 Ownership of equity in legal entities is usually evidenced by shares, stocks, depository receipts, participations, or similar documents. Shares and stocks have the same meaning.

Depository receipts

5.143 *Definition:* depository receipts represent ownership of securities listed in other economies; ownership of the depository receipts is treated as direct ownership of the underlying securities. A depository issues receipts listed on one exchange that represent ownership of securities listed on another exchange. Depository receipts facilitate transactions in securities in economies other than their home listing. The underlying securities may be shares or debt securities.

5.144 Equity is subcategorised into the following:

(a) listed shares (F.511);

(b) unlisted shares (F.512); and

(c) other equity (F.519).

5.145 Both listed shares and unlisted shares are negotiable, and described as equity securities.

Listed shares (F.511)

5.146 *Definition:* listed shares are equity securities listed on an exchange. Such an exchange may be a recognised stock exchange or any other form of secondary market. Listed shares are also referred to as quoted shares. The existence of quoted prices of shares listed on an exchange means that current market prices are usually readily available.

Unlisted shares (F.512)

5.147 *Definition:* unlisted shares are equity securities not listed on an exchange.

5.148 Equity securities include shares issued by unlisted limited liability companies as follows:

(a) capital shares which give the holders the status of joint owners and entitle them to a share in the total distributed profits and to a share in the net assets in the event of liquidation;

(b) redeemed shares whose capital has been repaid but which are retained by holders who continue to be joint owners and to be entitled to a share in the profits left after dividends have been paid on the remaining registered capital and also to a share in any surplus which may be left on liquidation, i.e. the net assets less the remaining registered capital;

(c) dividend shares, also called founders' shares, profits shares, and dividend shares, which are not part of the registered capital. Dividend shares do not give holders the status of joint owners — holders therefore do not have the right to a share in the repayment of the registered capital, the right to a return on this capital, the right to vote at shareholders' meetings, etc. Nevertheless, they entitle the holders to a proportion of any profits remaining after dividends have been paid on the registered capital and to a fraction of any surplus remaining on liquidation;

(d) Participating preference shares or stocks, which entitle holders to participate in the distribution of the residual value of a corporation on dissolution. The holders have also the right to participate in, or receive, additional dividends over and above the fixed percentage dividend. The additional dividends are usually paid in proportion to any ordinary dividends declared. In the event of liquidation, participating preference shareholders have the right to a share of any remaining proceeds that ordinary shareholders receive, and receive back what they paid for their shares.

Initial public offering, listing, de-listing, and share buy back

5.149 An initial public offering (IPO), also referred to simply as an 'offering' or a 'flotation', is when a corporation issues equity securities to the public for the first time. Such equity securities are often issued by smaller, younger corporations for financing reasons, or by large enterprises to become publicly traded. In an IPO the issuer may obtain the assistance of an underwriting entity, which helps to determine what type of equity security to issue, the best offering price and time to bring it to market.

5.150 Listing refers to the corporation's shares being on the list of stocks that are officially traded on a stock exchange. Normally, the issuing corporation is the one that applies for a listing but in some countries the exchange can list a corporation, for instance because its stock is already being actively traded via informal channels. Initial listing requirements usually include a history of a few years of financial statements; a sufficient size of the amount being placed among the general public, both in absolute terms and as a percentage of the total outstanding stock; and an approved prospectus, usually including opinions from independent assessors. De-listing refers to the practice of removing the shares of a corporation from a stock exchange. This occurs when a corporation goes out of business, declares bankruptcy, no longer satisfies the listing rules of a stock exchange, or has become a quasi-corporation or unincorporated business, often as a result of a merger or acquisition. Listing is recorded as an issuance of listed shares, and as a redemption of unlisted shares, while de-listing is recorded as a redemption of listed shares, and an issuance of unlisted shares where appropriate.

5.151 Corporations may buy back their own equity in a share repurchase, also known as a stock repurchase or a share buyback. A share buyback is recorded as a financial transaction, providing cash to the existing shareholders in exchange for a part of the corporation's outstanding equity. That is, cash is exchanged for a reduction in the number of shares outstanding. The corporation either retires the shares or keeps them as a 'treasury stock', available for reissuance.

Financial assets excluded from equity securities

5.152 Equity securities do not include:

(a) shares offered for sale but not taken up on issue. They are not recorded;

(b) debentures and loan stock convertible into shares. They are classified as debt securities (AF.3) up to the time when they are converted;

(c) the equity of partners with unlimited liability in incorporated partnerships. They are classified as other equity;

(d) government investments in the capital of international organisations which are legally constituted as corporations with share capital. They are classified as other equity (AF.519);

(e) issues of bonus shares i.e. the issue without payment of new shares to shareholders in proportion to their holdings. Such an issue, which changes neither the liability of the corporation vis-à-vis the shareholders nor the proportion of the assets that each shareholder holds in the corporation, does not constitute a financial transaction. Share split issues are also not recorded.

Other equity (F.519)

5.153 *Definition:* other equity comprises all forms of equity other than those classified in sub-categories listed shares (AF.511) and unlisted shares (AF.512).

5.154 Other equity includes:

(a) all forms of equity in corporations which are not shares, including the following:

(1) the equity in incorporated partnerships subscribed by unlimited partners;

(2) the equity in limited liability companies whose owners are partners and not shareholders;

(3) the capital invested in ordinary or limited partnerships recognised as independent legal entities;

(4) the capital invested in cooperative societies recognised as independent legal entities;

(b) investment by general government in the capital of public corporations whose capital is not divided into shares and which by virtue of special legislation are recognised as independent legal entities;

(c) investment by general government in the capital of the central bank;

(d) government investments in the capital of international and supranational organisations, with the exception of the IMF, even if these are legally constituted as corporations with share capital (e.g. the European Investment Bank);

(e) the financial resources of the ECB contributed by the national central banks;

(f) capital invested in financial and non-financial quasi-corporations. The amount of such investments corresponds to new investments in cash or kind, less any capital withdrawals;

(g) the financial claims that non-resident units have against notional resident units and vice versa.

Valuation of transactions in equity

5.155 New shares are recorded at issue value, which is nominal value plus the issue premium.

5.156 Transactions in shares in circulation are recorded at their transaction value. When the transaction value is not known, it is approximated by the stock exchange quotation or market price for listed shares and by the market-equivalent value for unlisted shares.

5.157 Scrip dividend shares are shares valued at the price implied by the issuer's dividend proposal.

5.158 Issues of bonus shares are not recorded. However, in cases where the issue of bonus shares involves changes in the total market value of the shares of a corporation, the changes in market value are recorded in the revaluation account.

5.159 The transaction value of equity (F.51) is the amount of funds transferred by the owners to corporations or quasi-corporations. In some cases, funds can be transferred by assuming liabilities of the corporation or quasi-corporation.

Investment fund shares or units (F.52)

5.160 *Definition:* investment fund shares are shares of an investment fund if the fund has a corporate structure. They are known as units if the fund is a trust. Investment funds are collective investment undertakings through which investors pool funds for investment in financial and/or non-financial assets.

5.161 Investment funds are also called mutual funds, unit trusts, investment trusts, and undertakings for collective investments in transferable securities (UCITS); they may be open-ended, semi-open or closed-end funds.

5.162 Investment fund shares may be listed or unlisted. When they are unlisted, they are usually repayable on request, at a value corresponding to their share in the own funds of the financial corporation. These own funds are revalued regularly on the basis of the market prices of their various components.

5.163 Investment fund shares are subdivided into:

Money market fund (MMF) shares or units (F.521); and

Non-MMF investment fund shares /units (F.522).

MMF shares or units (F.521)

5.164 *Definition:* MMF shares or units are shares issued by MMFs. MMF shares or units can be transferable and are often regarded as close substitutes for deposits.

Non-MMF investment fund shares/units (F.522)

5.165 *Definition:* other investment fund shares or units other than MMF shares or units represent a claim on a portion of the value of an investment fund other than an MMF. These types of shares and units are issued by investment funds.

5.166 Other unlisted investment fund shares or units other than MMF shares or units are usually repayable on request, at a value corresponding to their share in the own funds of the financial corporation. Such own funds are revalued regularly on the basis of the market prices of their various components.

Valuation of transactions in investment fund shares or units

5.167 Transactions in investment fund shares or units include the value of net contributions to a fund.

Insurance, pension and standardised guarantee schemes (F.6)

5.168 Insurance, pension and standardised guarantee schemes are divided into six subcategories:

(a) non-life insurance technical reserves (F.61);

(b) life insurance and annuity entitlements (F.62);

(c) pension entitlements (F.63);

(d) claims of pension funds on pension managers (F.64);

(e) entitlements to non-pension benefits (F.65); and

(f) provisions for calls under standardised guarantees (F.66).

Non-life insurance technical reserves (F.61)

5.169 *Definition:* non-life insurance technical reserves are financial claims that non-life insurance policy holders have against non-life insurance corporations in respect of unearned premiums and claims incurred.

5.170 Transactions in non-life insurance technical reserves for unearned premiums and claims incurred relate to risks like accidents, sickness, or fire, and also to reinsurance.

5.171 Unearned premiums are premiums paid but not yet earned. Premiums are usually paid at the beginning of the period covered by the policy. On an accrual basis, the premiums are earned throughout the policy period, so that the initial payment involves a prepayment or advance.

5.172 Claims outstanding are claims due but not yet settled, including cases where the amount is in dispute or the event leading to the claim has occurred but has not yet been reported. Claims due but not yet settled correspond to the reserves against outstanding insurance claims, which are amounts identified by insurance corporations to cover what they expect to pay out arising from events that have occurred but for which the claims are not yet settled.

5.173 Other technical reserves, such as equalisation reserves, may be identified by insurers. However, these are only recognised as liabilities and corresponding assets when there is an event giving rise to a liability. Otherwise, equalisation reserves are internal accounting entries by the insurer representing saving to cover irregularly occurring events, and do not represent existing claims of policy holders.

Life insurance and annuity entitlements (F.62)

5.174 *Definition:* life insurance and annuity entitlements consist of financial claims that life insurance policy holders and beneficiaries of annuities have against corporations providing life insurance.

5.175 Life insurance and annuity entitlements are used to provide benefits to policy holders upon the expiry of the policy, or to compensate beneficiaries upon the death of policyholders, so they are kept separate from shareholders' funds. Reserves in the form of annuities are based on the actuarial calculation of the present value of the obligations to pay future income until the death of the beneficiaries.

5.176 Transactions in life insurance and annuity entitlements consist of additions less reductions.

5.177 Additions in terms of financial transactions consist of:

(a) actual premiums earned during the current accounting period; and

(b) premium supplements, corresponding to the income from the investment of the entitlements attributed to the policy holders after deduction of service charges.

5.178 Reductions consist of:

(a) amounts due to holders of endowment and similar insurance policies; and

(b) payments due on policies that are surrendered before maturity.

5.179 In the case of a group insurance taken out by a corporation on behalf of its employees, the employees, but not the employer, are the beneficiaries since they are considered to be the policy holders.

Pension entitlements (F.63)

5.180 *Definition:* pension entitlements comprise financial claims that current employees and former employees hold against either:

(a) their employers;

(b) a scheme designated by the employer to pay pensions as part of a compensation agreement between the employer and the employee; or

(c) an insurer.

5.181 Transactions in pension entitlements consist of additions less reductions, which are to be distinguished from nominal holding gains or losses on the funds invested by pension funds.

5.182 Additions in terms of financial transactions consist of:

(a) actual contributions to pension schemes payable by employees, employers, self-employed persons or other institutional units on behalf of individuals or households with claims on the scheme, and earned during the current accounting period; and

(b) contribution supplements corresponding to the income earned from the investment of the pension entitlements of the pension scheme attributed to participating households, after deduction of service charges during the period for managing the scheme.

5.183 Reductions consist of:

(a) social benefits equal to the amounts payable to retired persons or their dependants in the form of regular payments or other benefits; and

(b) social benefits which consist of any lump sums payable to persons when they retire.

Contingent pension entitlements

5.184 The pension entitlements category does not include contingent pension entitlements established by institutional units classified as unfunded government defined benefit employer pension schemes or as social security pension funds. Their transactions are not fully recorded and their other flows and stocks are not recorded in the core accounts, but in the supplementary table on accrued-to-date pension entitlements in social insurance. Contingent pension entitlements are not liabilities of the central government, state government, local government or social security funds subsectors and are not financial assets of the prospective beneficiaries.

Claims of pension funds on pension managers (F.64)

5.185 An employer may contract with a third party to look after the pension funds for his employees. If the employer continues to determine the terms of the pension schemes and retains the responsibility for any deficit in funding as well as the right to retain any excess funding, the employer is described as the pension manager and the unit working under the direction of the pension manager is described as the pension administrator. If the agreement between the employer and the third party is such that the employer passes the risks and responsibilities for any deficit in funding to the third part in return for the right of the third party to retain any excess, the third party becomes the pension manager as well as the administrator.

5.186 When the pension manager is a unit different from the administrator and the amount accruing to the pension fund falls below the increase in entitlements, a claim of the pension fund on the pension manager is recorded. Where the amount accruing to the pension fund exceeds the increase in entitlements, there is an amount payable by the pension fund to the pension manager.

Entitlements to non-pension benefits (F.65)

5.187 The excess of net contributions over benefits represents an increase in the liability of the insurance scheme towards the beneficiaries. This item is shown as an adjustment in the use of income account. As an increase in a liability, it is also shown in the financial account. This item is likely to occur only rarely and, for pragmatic reasons, changes in such non-pension entitlements may be included with those for pensions.

Provisions for calls under standardised guarantees (F.66)

5.188 *Definition:* provisions for calls under standardised guarantees are financial claims that holders of standardised guarantees have against institutional units providing them.

5.189 Provisions relating to calls under standardised guarantees are prepayments of net fees and provisions to meet outstanding calls under standardised guarantees. Like provisions for prepaid insurance premiums and reserves, provisions for calls under standardised guarantees include unearned fees (premiums) and calls (claims) not yet settled.

5.190 Standardised guarantees are guarantees that are issued in large numbers, usually for fairly small amounts, along identical lines. Such arrangements involve three parties: the borrower, the lender and the guarantor. Either the borrower or the lender may contract with the guarantor to repay the lender if the borrower defaults. Examples are export credit guarantees and student loan guarantees.

5.191 Although it is not possible to establish the likelihood of any particular borrower defaulting, it is usual to estimate how many out of a batch of similar borrowers will default. Much like a non-life insurer, a guarantor working on commercial lines will expect all the fees paid, plus the property income earned on the fees and any reserves, to cover the expected defaults and associated costs and leave a profit. Accordingly a similar treatment to that of non-life insurance is adopted for such guarantees, described as standardised guarantees.

5.192 Standardised guarantees cover guarantees on various financial instruments like deposits, debt securities, loans and trade credit. They are usually provided by a financial corporation, including but not confined to insurance corporations, but also by general government.

5.193 When an institutional unit offers standardised guarantees, it charges fees and incurs liabilities to meet the call on the guarantee. The value of the liabilities in the accounts of the guarantor is equal to the present value of the expected calls under existing guarantees, net of any recoveries the guarantor expects to receive from the defaulting borrowers. The liability is called provisions for calls under standardised guarantees.

5.194 A guarantee may cover a multi-year period. A fee may be payable annually or up-front. In principle, the fee represents charges earned in each year the guarantee holds, with the liability decreasing as the period gets shorter (assuming that the borrower repays in instalments). Thus recording follows that of annuities with the fee paid as the future liability decreases.

5.195 The nature of a standardised guarantee scheme is that there are many guarantees of the same type, though not all for exactly the same time period nor all starting and finishing on the same dates.

5.196 Net fees are calculated as fees receivable plus fee supplements (equal to the property income attributed to the unit paying the fee for the guarantee) less administration, etc. costs. Such net fees may be payable by any sector of the economy and are receivable by the sector in which the guarantor is classified. Calls under standardised guarantee schemes are payable by the guarantor and receivable by the lender of the financial instrument under guarantee, regardless of whether the fee was paid by the lender or the borrower. Financial transactions refer to the difference between the payment of fees for new guarantees and calls made under existing guarantees.

Standardised guarantees and one-off guarantees

5.197 Standardised guarantees are distinguished from one-off guarantees according to two criteria:

(a) standardised guarantees are characterised by often repeated transactions with similar features and pooling of risks; and

(b) guarantors are able to estimate the average loss based on available statistics.

One-off guarantees are individual, and guarantors are not able to make a reliable estimate of the risk of calls. The granting of a one-off guarantee is a contingency and not recorded. Exceptions are certain guarantees provided by government and described in Chapter 20.

Financial derivatives and employee stock options (F.7)

5.198 Financial derivatives and employee stock options are divided into two subcategories:

(a) financial derivatives (F.71); and

(b) employee stock options (F.72).

Financial derivatives (F.71)

5.199 *Definition:* financial derivatives are financial instruments linked to a specified financial instrument or indicator or commodity, through which specific financial risks can be traded in financial markets in their own right. Financial derivatives meet the following conditions:

(a) they are linked to a financial or non-financial asset, to a group of assets, or to an index;

(b) they are either negotiable or can be offset on the market; and

(c) no principal amount is advanced to be repaid.

5.200 Financial derivatives are used for a number of purposes including risk management, hedging, arbitrage between markets, speculation and compensation of employees. Financial derivatives enable parties to trade specific financial risks such as interest rate risk, currency, equity and commodity price risk and credit risk, to other entities which are willing to take these risks, usually without trading in a primary asset. Accordingly, financial derivatives are referred to as secondary assets.

5.201 The value of a financial derivative derives from the price of the underlying asset: the reference price. The reference price may relate to a financial or non-financial asset, an interest rate, an exchange rate, another derivative or a spread between two prices. The derivative contract may also refer to an index, a basket of prices or other items like emissions trading or weather conditions.

5.202 Financial derivatives can be categorised by instrument such as options, forwards and credit derivatives, or by market risk as currency swaps, interest rate swaps, etc.

Options

5.203 *Definition:* options are contracts which give the holder of the option the right, but not the obligation, to purchase from or sell to the issuer of the option an asset at a predetermined price within a given time span or on a given date.

The right to purchase is known as a call option, and the right to sell is known as a put option.

5.204 The purchaser of the option pays a premium (the option price) for the commitment of the option writer to sell or purchase the specified amount of the underlying asset at the agreed price. The premium is a financial asset of the option holder and a liability of the option writer. The premium can be conceptually considered to include a service charge, which is to be recorded separately. However, in the absence of detailed data, assumptions should be avoided as much as possible when identifying the service element.

5.205 Warrants are a form of options. They give the holder the right but not the obligation to purchase from the issuer of the warrant a certain number of shares or bonds under specified conditions for a specified period of time. There are also currency warrants based on the amount of one currency required to purchase another and cross-currency warrants tied to third currencies as well as index-, basket- and commodity-warrants.

5.206 The warrant may be detachable and traded separately from the debt security. As a result, two separate financial instruments are recorded in principle, the warrant as a financial derivative and the bond as a debt security. Warrants with embedded derivatives are classified according to their primary characteristics.

Forwards

5.207 *Definition:* forwards are financial contracts under which two parties agree to exchange a specified quantity of an underlying asset at an agreed price (the strike price) on a specified date.

5.208 Futures are forward contracts traded on organised exchanges. Futures and other forward contracts are typically, but not always, settled by the payment of cash or the provision of some other financial asset rather than the delivery of the underlying asset, and, therefore, are valued and traded separately from the underlying item. Common forward-type contracts include swaps and forward rate agreements (FRAs).

Options vis-à-vis forwards

5.209 Options can be contrasted with forwards in that:

(a) at inception, there is usually no up-front payment for a forward contract and the derivative contract begins with zero value; in the case of an option, a premium is paid when the contract is taken out, and at inception the contract is valued at the amount of the premium;

(b) as market prices, interest rates or exchange rates change during the life of a forward contract, the contract may take on a positive value for one party (as an asset) and a corresponding negative value (as a liability) for the other. Such positions may switch between the parties, depending on market developments in the underlying asset in relation to the strike price in the contract. This characteristic makes it impractical to identify transactions in assets separately from transactions in liabilities. Unlike other financial instruments, transactions in forwards are therefore normally reported net over assets and liabilities. In the case of an option, the buyer is always the creditor and the writer always the debtor;

(c) at maturity, redemption is unconditional for a forward, whereas for an option it is determined by the buyer of the option. Some options are redeemed automatically when they are positive at maturity.

Swaps

5.210 *Definition:* swaps are contractual arrangements between two parties who agree to exchange, over time and according to predetermined rules, streams of payment on an agreed notional amount of principal. The most common types are interest rate swaps, foreign exchange swaps and currency swaps.

5.211 Interest rate swaps are an exchange of interest payments of different character on a notional amount of principal, which is never exchanged. Examples of the types of interest rate swapped are fixed rate, floating rate and rates denominated in a currency. Settlements are often made through net cash payments amounting to the current difference between the two interest rates stipulated in the contract applied to the agreed notional principal.

5.212 Foreign exchange swaps are transactions in foreign currencies at a rate of exchange stated in the contract.

5.213 Currency swaps involve an exchange of cash flows related to interest payments and an exchange of principal amounts at an agreed exchange rate at the end of the contract.

Forward rate agreements (FRAs)

5.214 *Definition:* FRAs are contractual arrangements in which two parties, to protect themselves against interest rate changes, agree on an amount of interest to be paid, at a specified settlement date, on a notional amount of principal that is never exchanged. FRAs are settled by net cash payments in a similar way as interest rate swaps. The payments are related to the difference between the forward rate agreement rate and the prevailing market rate at the time of settlement.

Credit derivatives

5.215 *Definition:* credit derivatives are financial derivatives the primary purpose of which is to trade credit risk.

Credit derivatives are designed for trading in loan and security default risk. Credit derivatives may take the form of forward-type or option-type contracts and, like other financial derivatives, are frequently drawn up under standard legal agreements which facilitate market valuation. Credit risk is transferred from the risk seller, who is buying protection, to the risk buyer, who is selling protection, in exchange for a premium.

5.216 The risk buyer pays cash to the risk seller in the event of a default. A credit derivative may also be settled by the delivery of debt securities through the unit that has defaulted.

5.217 Types of credit derivatives are credit default options, credit default swaps (CDS) and total return swaps. A CDS index as a traded credit derivative index reflects the development of CDS premiums.

Credit default swaps

5.218 *Definition:* credit default swaps (CDS) are credit insurance contracts. They are intended to cover losses to the creditor (buyer of a CDS) when:

(a) a credit event occurs in relation to a reference unit, rather than being associated to a particular debt security or loan. A credit event affecting the reference unit of concern may be a default, but also a failure to make a payment on any (qualifying) liability that has become due as in cases such as debt restructuring, breach of covenants, and others;

(b) a particular debt instrument, typically a debt security or a loan, goes into default. As with swap contracts, the buyer of the CDS, (regarded as the risk seller), makes a series of premium payments to the seller of the CDS (regarded as the risk buyer).

5.219 Where there is no default on the associated unit or the debt instrument, the risk seller continues paying premiums until the end of the contract. If there is a default, the risk buyer compensates the risk seller for the loss, and the risk seller ceases to pay premiums.

Financial instruments not included in financial derivatives

5.220 Financial derivatives do not include:

(a) the underlying instrument upon which the financial derivative is based;

(b) structured debt securities that combine a debt security, or a basket of debt securities, with a financial derivative or a basket of financial derivatives, where the derivatives are inseparable from the debt security and the principal initially invested is large compared to the prospective returns from the embedded financial derivatives. Financial instruments where small principal amounts are invested relative to the prospective returns, and which are fully at risk, are classified as financial derivatives. Financial instruments where the debt security component and the financial derivative component are separable from each other are classified accordingly;

(c) repayable margin payments related to financial derivatives are classified in other deposits or loans depending on the institutional units involved. However, non-repayable margin payments, reducing or eliminating the asset/liability positions which may emerge during the life of the contract, are treated as settlements under the contract, and classified as transactions in financial derivatives;

(d) secondary instruments, which are not negotiable and cannot be offset on the market; and

(e) gold swaps, which have the same nature as securities repurchase agreements.

Employee stock options (F.72)

5.221 *Definition:* employee stock options are agreements made on a given date under which an employee has the right to purchase a given number of shares of the employer's stock at a stated price either at a stated time or within a period of time immediately following the vesting date.

The following terminology is used:

the date of the agreement is the 'grant date';

the purchase price agreed is the 'strike price';

the agreed first date of purchase is the 'vesting date';

the period after the vesting date in which the purchase can be made is the 'exercise period'.

5.222 Transactions in employee stock options are recorded in the financial account as the counterpart to the element of compensation of employees represented by the value of the stock option. The value of the option is spread over the period between the grant date and vesting date; if the detailed data are lacking, they are to be recorded at the vesting date. Thereafter, transactions are recorded at exercise date or, if they are tradable and are actually traded, between the vesting date and the end of the exercise period.

Valuation of transactions in financial derivatives and employee stock options

5.223 Secondary trade in options and closing out options prior to delivery involve financial transactions. If an option proceeds to delivery, it may be exercised or not exercised. In cases where the option is exercised, there may be a payment from the option writer to the option holder equal to the difference between the prevailing market price of the underlying asset and the strike price, or, alternatively, there may be an acquisition or sale of the underlying financial or non-financial asset recorded at the prevailing market price and a counterpart payment between the option holder and the option writer equal to the strike price. The difference between the prevailing market price of the underlying asset and the strike price is in both cases equal to the liquidation value of the option, which is the option price on the terminal date. In cases where the option is not exercised, no transaction takes place. However, the option writer makes a holding gain and the option holder makes a holding loss (in both cases equal to the premium paid when the contract was taken out) to be recorded in the revaluation account.

5.224 The transactions recorded for financial derivatives include any trading in the contracts as well as the net value of settlements made. There may also be the need to record transactions associated with the establishment of derivative contracts. However, in many cases, the two parties will enter into a derivative contract without any payment by one party to the other; in such cases the value of the transaction establishing the contract is nil and nothing is recorded in the financial account.

5.225 Any explicit commissions paid or received from brokers or intermediaries for arranging options, futures, swaps, and other derivatives contracts are treated as payments for services in the appropriate accounts. The parties to a swap are not considered to be providing a service to each other, but any payment to a third party for arranging the swap is treated as payment for a service. Under a swap arrangement, where principal amounts are exchanged the corresponding flows are to be recorded as transactions in the underlying instrument; streams of other payments are to be recorded under the financial derivatives and employee stock options (F.7) category. While the premium paid to the seller of an option can conceptually be considered to include a service charge, in practice it is usually not possible to distinguish the service element. Therefore, the full price is to be recorded as acquisition of a financial asset by the buyer and as incurrence of a liability by the seller.

5.226 Where contracts do not involve an exchange of principal, no transaction is recorded at inception. In both cases, implicitly, a financial derivative with a zero initial value is created at that point. Subsequently, the value of a swap will be equal to one of the following:

(a) for principal amounts, the current market value of the difference between the expected future market values of the amounts to be re-exchanged and the amounts specified in the contract; and

(b) for other payments, the current market value of the future streams specified in the contract.

5.227 Changes in the value of the financial derivative over time are recorded in the revaluation account.

5.228 Subsequent re-exchanges of principal will be governed by the terms and conditions of the swap contract and may imply financial assets being exchanged at a price different from the prevailing market price of such assets. The counterpart payment between the parties to the swap contract will be that specified within the contract. The difference between the market price and the contract price is then equal to the liquidation value of the asset/liability as it applies on the due date and is recorded as a transaction in financial derivatives and employee stock options (F.7). In total, transactions in financial derivatives and employee stock options must match the total revaluation gain or loss throughout the duration of the swap contract. This treatment is analogous to that set out with respect to options, which proceed to delivery.

5.229 For an institutional unit, a swap or a forward rate agreement is recorded under the item financial derivatives and employee stock options on the assets side where it has a net asset value. Where the swap has a net liability value, it is also recorded on the asset side by convention to avoid flipping between the asset and the liability side. Accordingly, negative net payments increase the net value.

Other accounts receivable/payable (F.8)

5.230 *Definition:* other accounts receivable/payable are financial assets and liabilities created as counterparts to transactions where there is a timing difference between these transactions and the corresponding payments.

5.231 Other accounts receivable/payable include transactions in financial claims which stem from the early or late payment for transactions in goods or services, distributive transactions or financial transactions on the secondary market.

5.232 Financial transactions in other accounts receivable/payable comprise:

(a) Trade credits and advances (F.81); and

(b) Other accounts receivable/payable, excluding trade credits and advances (F.89).

Trade credits and advances (F.81)

5.233 *Definition:* trade credits and advances are financial claims arising from the direct extension of credit by the suppliers of goods and services to their customers, and advances for work that is in progress or is yet to be undertaken, in the form of prepayment by customers for goods and services not yet provided.

5.234 Trade credits and advances arise when payment for goods or services is not made at the same time as the change in ownership of a good or provision of a service. If a payment is made prior to the change of ownership, there is an advance.

5.235 FISIM accrued but not yet paid is included with the corresponding financial instrument, usually interest, and prepayment of insurance premiums is included in insurance technical reserves (F.61); in neither case is there an entry in trade credits and advances.

5.236 The trade credits and advances subcategory includes:

(a) financial claims relating to the delivery of goods or services where payment has not taken place;

(b) trade credits accepted by factoring corporations except when regarded as a loan;

(c) rent of buildings accruing over time; and

(d) arrears concerning the payment of goods and services, when not evidenced by a loan.

5.237 Trade credits are to be distinguished from trade finance in the form of trade bills, and credit provided by third parties to finance trade.

5.238 Trade credits and advances do not include loans to finance trade credits. They are classified in loans.

5.239 Trade credits and advances may be divided by original maturity into short-term and long-term trade credits and advances.

Other accounts receivable/payable, excluding trade credits and advances (F.89)

5.240 *Definition:* other accounts receivable/payable are financial claims arising from timing differences between distributive transactions or financial transactions on the secondary market and the corresponding payments.

5.241 Other accounts receivable/payable include financial claims created as a result of the timing difference between accrued transactions and payments made in respect of, for example:

(a) wages and salaries;

(b) taxes and social contributions;

(c) dividends;

(d) rent; and

(e) purchase and sale of securities.

5.242 Interest accrued and arrears are recorded with the financial asset or liability on which they accrue, and not as other accounts receivable/payable. If the interest accrued is not recorded as being reinvested in the financial asset, it is classified in other accounts receivable/payable.

5.243 For securities lending and gold loan fees, which are treated as interest, the corresponding entries are included under other accounts receivable/payable, rather than with the instrument to which they relate.

5.244 Other accounts receivable/payable do not include:

(a) statistical discrepancies other than timing differences between transactions in goods and services, distributive transactions or financial transactions and the corresponding payments;

(b) early or late payment in the creation of financial assets or the redemption of liabilities other than those classified in other accounts receivable/payable. These early or late payments are classified in the relevant instrument category;

(c) the amounts of taxes and social contributions payable to the general government to be included under other accounts receivable/payable omits that part of these taxes and social contributions which is unlikely to be collected, and which therefore represents a general government claim of no value.

Annex 5.1

Classification of financial transactions

5.A1.01 Financial transactions may be classified according to different criteria: by type of financial instrument, negotiability, type of income, maturity, currency and type of interest.

Classification of financial transactions by category

5.A1.02 Financial transactions are classified in categories and subcategories as shown in Table 5.3. This classification of the transactions in financial assets and liabilities corresponds to the classification of financial assets and liabilities.

Table 5.3 — Classification of financial transactions

Category	Code		
Monetary gold and special drawing rights (SDRs)	F.1		
Monetary gold		F.11	
Special drawing rights (SDRs)		F.12	
Currency and deposits	F.2		
Currency		F.21	
Transferable deposits		F.22	
Other deposits		F.29	
Debt securities	F.3		
Short-term		F.31	
Long-term		F.32	
Loans	F.4		
Short-term		F.41	
Long-term		F.42	
Equity and investment fund shares or units	F.5		
Equity		F.51	
Listed shares			F.511
Unlisted shares			F.512
Other equity			F.519
Investment fund shares or units		F.52	
Money market fund shares or units (MMFs)			F.521
Non-MMF investment fund shares/units			F.522
Insurance, pension and standardised guaranteed schemes	F.6		
Non-life insurance technical reserves		F.61	
Life insurance and annuity entitlements		F.62	
Pension entitlements		F.63	
Claims of pension funds on pension managers		F.64	
Entitlements to non-pension benefits		F.65	
Provisions for calls under standardised guarantees		F.66	
Financial derivatives and employee stock options	F.7		

Category		Code
Financial derivatives other than employee stock options		F.71
Employee stock options		F.72
Other accounts receivable/payable	F.8	
Trade credits and advances		F.81
Other accounts receivable/payable, excluding trade credits and advances		F.89

5.A1.03 The classification of financial transactions and of financial assets and liabilities is based primarily on the liquidity, the negotiability and the legal characteristics of the financial instruments. The definitions of the categories are in general independent of the classification of institutional units. The classification of financial assets and liabilities can be further detailed by a cross-classification by institutional unit. An example is the cross-classification of transferable deposits between deposit taking corporations, other than the central bank, as interbank positions.

Classification of financial transactions by negotiability

5.A1.04 Financial claims can be distinguished by whether they are negotiable or not. A claim is negotiable if its ownership is readily capable of being transferred from one unit to another by delivery or endorsement or of being offset in the case financial derivatives. While any financial instrument can be potentially traded, negotiable instruments are designed to be traded on an organised exchange or 'over-the-counter', although actual trading is not a necessary condition for negotiability. Necessary conditions of negotiability are:

(a) transferability or offsetability in the case of financial derivatives;

(b) standardisation often evidenced by fungibility and eligibility of an ISIN code; and

(c) that the holder of an asset does not retain the right of recourse against the previous holders.

5.A1.05 Securities, financial derivatives and employee stock options (AF.7) are negotiable financial claims. Securities include debt securities (AF.3), listed shares (AF.511), unlisted shares (AF.512), and investment fund shares (AF.52). Financial derivatives and employee stock options are not classified as securities even if they are negotiable financial instruments. They are linked to specific financial or non-financial assets or indices through which financial risks can be traded in financial markets in their own right.

5.A1.06 Monetary gold and SDRs (AF.1), currency and deposits (AF.2), loans (AF.4), other equity (AF.519), insurance, pension and standardised guarantee schemes (AF.6) and other accounts receivable/payable (AF.8) are not negotiable.

Structured securities

5.A1.07 Structured securities typically combine a security, or a basket of securities, with a financial derivative, or a basket of financial derivatives. Financial instruments which are not structured securities are, for instance, structured deposits which combine characteristics of deposits and of financial derivatives. While debt securities typically involve payment at inception of a principal to be repaid, financial derivatives do not.

Classification of financial transactions by type of income

5.A1.08 Financial transactions are classified by the type of income they generate. The linking of income with the corresponding financial assets and liabilities facilitates calculation of rates of return. Table 5.4 shows the detailed classification by transaction and by income type. While monetary gold and SDRs, deposits, debt securities, loans and other accounts receivable/payable accrue interest, equity pays predominantly dividends, reinvested earnings or withdrawals from income of quasi-corporations. Investment income is attributable to holders of investment fund shares and of insurance technical reserves. The remuneration related to the participation in a financial derivative is not recorded as income, because no principal amount is provided.

Table 5.4 — Classification of financial transactions by type of income

Financial transactions	Code	Type of income	Code
Monetary gold and special drawing rights (SDRs)	F.1	Interest	D.41
Currency	F.21	None	
Transferable deposits	F.22	Interest	D.41
Other deposits	F.29	Interest	D.41
Debt securities	F.3	Interest	D.41
Loans	F.4	Interest	D.41
Equity	F.51	Distributed income of corporations	D.42
		Reinvested earnings	D.43
Listed and unlisted shares	F.511	Dividends	D.421
	F.512	Reinvested earnings	D.43
Other equity	F.519	Withdrawals from income of quasi-corporations	D.422
		Reinvested earnings	D.43
		Dividends	D.421
Investment fund shares or units	F.52	Investment income attributable to investment fund shareholders	D.443
Insurance, pension and standardised guarantee schemes	F.6	Investment income attributable to insurance policy holders	D.441
		Investment income payable on pension entitlements	D.442
Financial derivatives and employee stock options	F.7	None	
Other accounts receivable/payable	F.8	Interest	D.41

Classification of financial transactions by type of interest rate

5.A1.09 Financial assets and liabilities accruing interest may be broken down by the type of interest rate namely fixed, variable, or mixed interest rates.

5.A1.10 For financial instruments with a fixed interest rate the contractual nominal interest payments are fixed in terms of the currency of denomination for the life of the financial instrument or for a certain number of years. At the date of inception, from the debtor's perspective, the timing and value of interest payments and principal repayments are known.

5.A1.11 For financial instruments with a variable interest rate, interest and principal payments are linked to an interest rate, general price index for goods and services or asset price. The reference value fluctuates in response to market conditions.

5.A1.12 Mixed interest rate financial instruments have both a fixed and a variable interest rate over their life and are classified as variable interest rate financial instruments.

Classification of financial transactions by maturity

5.A1.13 For the analysis of interest rates, asset yields, liquidity or debt servicing capacity, a breakdown of financial assets and liabilities by a range of maturities may be required.

Short-term and long-term maturity

5.A1.14 *Definition:* a financial asset or liability with short-term maturity is repayable on demand at the request of the creditor, or in one year or less. A financial asset or liability with long-term maturity is repayable at some date beyond one year, or has no stated maturity.

Original maturity and remaining maturity

5.A1.15 *Definition:* the original maturity of financial assets or liabilities is defined as the period from the issue date until the final scheduled payment date. A remaining maturity of financial assets or of liabilities is defined as the period from the reference date until the date of the final scheduled payment.

5.A1.16 The original maturity concept is helpful in understanding debt issuance activity. Therefore, debt securities and loans are split by original maturity into short-term and long-term debt securities and loans.

5.A1.17 Remaining maturity is more relevant to analysis of debt positions and debt servicing capabilities.

Classification of financial transactions by currency

5.A1.18 Many of the categories, subcategories and sub-positions of the financial assets and liabilities may be broken down by the currency in which they are denominated.

5.A1.19 Financial assets or liabilities in foreign currency include financial assets or liabilities denominated in a currency basket, for example SDRs and financial assets or liabilities denominated in gold. A distinction between national currency and foreign currencies is particularly useful for currency and deposits (AF.2), debt securities (AF.3) and loans (AF.4).

5.A1.20 The currency of settlement may be different from the currency of denomination. The currency of settlement refers to the currency into which the value of positions and flows of financial instruments such as securities are converted each time settlement occurs.

Measures of money

5.A1.21 Monetary policy analysis may require measures of money such as M1, M2 and M3 to be identified in the financial account. Measures of money are not defined in the ESA 2010.

CHAPTER 6

Other flows

Introduction

6.01 Other flows are changes in the value of assets and liabilities that do not result from transactions. The reason that these flows are not transactions is linked to their not meeting one or more of the characteristics of transactions, for example, the institutional units involved may not be acting by mutual agreement, as in the case of an uncompensated seizure of assets, or the change may be due to a natural event such as an earthquake rather than a purely economic phenomenon. Alternatively, the value of an asset expressed in foreign currency may change as a result of an exchange rate change.

Other changes in assets and liabilities

6.02 *Definition:* other changes in assets and liabilities are economic flows, other than those that occur through transactions recorded in the capital and financial accounts, that change the value of assets and liabilities.

Two types of other changes are distinguished. The first consists of changes in the volume of assets and liabilities. The second is through nominal holding gains and losses.

Other changes in the volume of assets and liabilities (K.1 to K.6)

6.03 In the capital account, produced and non-produced assets may enter and leave a sector through acquisitions and disposals of assets, consumption of fixed capital or additions to, withdrawals from and recurrent losses from inventories. In the financial account, financial assets and liabilities enter the system when a debtor accepts a future obligation to pay a creditor, and leave the system when this obligation has been fulfilled.

6.04 Other changes in the volume of assets and liabilities include flows that allow assets and liabilities to enter or leave the accounts other than by transactions — for example, entrances and exits of the discovery, depletion and degradation of natural assets.

Other changes in the volume of assets and liabilities also include the effect of exceptional, unanticipated external events that are not economic in nature, and changes resulting from reclassification or restructuring of institutional units or assets and liabilities.

6.05 Other changes in the volume of assets and liabilities cover six categories:

(a) economic appearance of assets (K.1);

(b) economic disappearance of non-produced assets (K.2);

(c) catastrophic losses (K.3);

(d) uncompensated seizures (K.4);

(e) other changes in volume not elsewhere classified (K.5); and

(f) changes in classification (K.6).

Economic appearance of assets (K.1)

6.06 Economic appearance of assets is the increase in the volume of produced and non-produced assets that is not the result of production. Included are:

(a) historic monuments, e.g. those structures or sites with special archaeological, historical or cultural significance, when their value is first recognised in the balance sheet;

(b) valuables, such as precious stones, antiques and art objects, when the high value or artistic significance of an object not already recorded in the balance sheet is first recognised;

(c) discoveries of exploitable subsoil resources such as proven reserves of coal, oil, natural gas, metallic or non-metallic minerals. This also covers the upwards reappraisals of the value of reserves when exploitation becomes economically viable as a result of technological progress or relative price changes;

(d) natural growth of uncultivated biological resources, such as natural forests and the stock of fish, where the growth in such economic assets is not under the direct control, responsibility and management of an institutional unit and thus not treated as production;

(e) transfers of other natural resources to economic activity: natural resources that change status to qualify as economic assets. Examples include the initial exploitation of virgin forests, transfer of land from a wild or waste state to land that can be put to economic use, land reclamation and initial charging for extraction of water. The natural resources may also acquire value due to economic activity in the vicinity, for example, land may be recognised as valuable because of a nearby development or creation of an access road. The cost of land improvements is recorded as gross fixed capital formation but any excess in the increase of value of the land over the value of the land improvements is recorded as economic appearance;

(f) quality changes in natural assets due to changes in economic uses. Changes in quality are recorded as changes in volume. The quality changes recorded here occur as the counterpart of the changes in economic use that are shown as changes in classification (see paragraph 6.21). For example, the reclassification of cultivated land to land underlying buildings may result in an increase in value as well as a change in classification. In this case the asset is already within the asset boundary and it is the change in quality of the asset due to the change of economic use that is regarded as the appearance of an asset. Another example is the increase in value of dairy cattle when sent to slaughter earlier than expected;

(g) initial appearance of value from granting transferable contracts, leases, licences or permits. The value in such contracts, leases, licences or permits represents an asset when the value of the entitlement they give exceeds the fees payable and the holder can realise this by transferring them to others; and

(h) changes in the value of goodwill and marketing assets, which materialises when institutional units are sold at prices that exceed their own funds (see paragraph 7.07); the excess of purchase price over own funds is referred to as purchased goodwill and marketing assets. Goodwill not evidenced by a sale/purchase is not considered as an economic asset.

Economic disappearance of non-produced assets (K.2)

6.07 Economic disappearance of non-produced non-financial assets includes:

(a) depletion of natural resources, which covers the reduction of the value of deposits of subsoil assets, and the depletion of uncultivated biological resources included in the asset boundary (see point (e) of paragraph 6.06) as a result of harvesting, forest clearance or use beyond sustainable levels of extraction. Many of the possible entries here are the opposite of the entries described in points (c) to (f) of paragraph 6.06;

(b) other economic disappearance of non-produced assets, which covers:

(i) the writing-down of the value of purchased goodwill and marketing assets; and

(ii) the expiration of the advantages given by transferable contracts, leases, licences and permits.

Catastrophic losses (K.3)

6.08 Catastrophic losses recorded as other changes in volume result from large-scale, discrete and recognisable events that destroy economic assets.

6.09 Such events include major earthquakes, volcanic eruptions, tidal waves, exceptionally severe hurricanes, drought and other natural disasters; acts of war, riots and other political events; and technological accidents such as major toxic spills or release of radioactive particles into the air. Examples of such events are:

(a) deterioration in the quality of land caused by abnormal flooding or wind damage;

(b) destruction of cultivated assets by drought or outbreak of disease;

(c) destruction of buildings, equipment or valuables in forest fires or earthquakes; and

(d) accidental destruction of currency or bearer securities as a result of natural catastrophes or political events, or destruction of evidence of ownership.

Uncompensated seizures (K.4)

6.10 Uncompensated seizures occur when governments or other institutional units take possession of the assets of other institutional units, including non-resident units, without full compensation, for reasons other than the payment of taxes, fines or similar levies. The seizure of property related to criminal activity is considered to be a fine. The uncompensated part of such unilateral seizures is recorded as other change in volume.

6.11 Foreclosures and repossessions of assets by creditors are not recorded as uncompensated seizures because, either explicitly or by general understanding, the agreement between the parties provides for this avenue of recourse.

Other changes in volume not elsewhere classified (K.5)

6.12 Other changes in volume not elsewhere classified (K.5) are the effects of unexpected events on the economic value of assets.

6.13 Examples of other changes in volume not elsewhere classified of non-financial assets include:

(a) unforeseen obsolescence. Assumptions used in deriving consumption of fixed capital will not cover unforeseen obsolescence in fixed assets. The amount included for their expected obsolescence may fall short of the actual obsolescence. Entries must, therefore, be made for the decline in the value of the fixed assets resulting from, for example, the introduction of improved technology;

(b) differences between allowances included in consumption of fixed capital for normal damage and actual losses. Consumption of fixed capital does not cover unforeseen damage, and the amount estimated for normally expected damage may fall short or exceed the actual damage. Adjustments must, therefore, be made for the unforeseen decline or increase in the value of the fixed assets due to such events. The losses adjusted for here are not sufficiently large to be considered catastrophic;

(c) degradation of fixed assets not accounted for in consumption of fixed capital. This covers the decline in the value of fixed assets from, for example, the unforeseen effects of acidity in air and rain on building surfaces or vehicle bodies;

(d) abandonment of production facilities before completion or being brought into economic use;

(e) exceptional losses in inventories (e.g. from fire damage, robberies, or insect infestation of grain stores) that are not considered as catastrophic losses.

6.14 Examples of other changes in volume not elsewhere classified concerning financial assets and liabilities include:

(a) losses of currency or bearer securities for reasons (such as fire damage or theft) that are not considered catastrophic, and currency withdrawn from circulation that is no longer exchangeable, excluding amounts where there has been a change in classification from currency to valuables;

(b) changes in financial claims resulting from write-offs. These are excluded from the financial account because there is no mutual agreement between the parties. Specifically, a creditor may decide that a financial claim can no longer be collected, for example because of bankruptcy or liquidation, and removes the claim from their balance sheet. The creditor's recognition that the claim is uncollectable is recorded as other changes in the volume of assets. The corresponding liability must also be removed from the balance sheet of the debtor to maintain balance in the accounts of the total economy. An exception to this general principle is made for taxes and social contributions payable to general government (see point (d) of paragraph 6.15);

(c) changes of life insurance, annuity entitlements and pension entitlements due to changes in demographic assumptions;

(d) provisions for calls under standardised guarantee schemes when the expected calls exceed the expected receipts and recoveries.

6.15 Other changes in volume not elsewhere classified exclude:

(a) changes in financial claims resulting from write-downs that reflect the actual market values of tradable financial claims: these are accounted for in the revaluation account;

(b) cancellation of debt by mutual agreement between debtor and creditor (debt cancellation or debt forgiveness): this is recorded as a transaction between the creditor and the debtor (see point (f) of paragraph 4.165);

(c) debt repudiation: the unilateral cancellation of a liability by a debtor is not recognised;

(d) taxes and social contributions payable to general government that general government unilaterally recognises as unlikely to be collected (see paragraphs 1.57, 4.27 and 4.82).

Changes in classification (K.6)

6.16 Changes in classification comprise changes in sector classification and institutional unit structure, and changes in classification of assets and liabilities.

Changes in sector classification and institutional unit structure (K.61)

6.17 Reclassifying an institutional unit from one sector to another transfers its entire balance sheet, e.g. if an institutional unit classified in the households sector becomes financially distinct from its owner, it may qualify as a quasi-corporation and be reclassified in the non-financial corporations sector.

6.18 Changes in sector classification transfer the entire balance sheet from one sector or subsector to another. The transfer may result in consolidation or deconsolidation of assets and liabilities, which is also included in this category.

6.19 Changes in structure of institutional units cover appearance and disappearance of certain financial assets and liabilities arising from corporate restructuring. When a corporation disappears as an independent legal entity because it is absorbed by one or more corporations, all financial assets and liabilities, including shares and other equity that existed between that corporation and those that absorbed it, disappear from the system. However, the purchase of shares and other equity of a corporation as part of a merger is recorded as a financial transaction between the purchasing corporation and its previous owners. The replacement of existing shares by shares in the purchasing corporation, or a new corporation, is recorded as redemptions of shares accompanied by the issue of new shares. Financial assets and liabilities that existed between the absorbed corporation and third parties remain unchanged and pass to the absorbing corporation.

6.20 Symmetrically, when a corporation is legally split up into two or more institutional units, the appearance of financial assets and liabilities is recorded as changes in sector classification and structure.

Changes in classification of assets and liabilities (K.62)

6.21 Changes in classification of assets and liabilities occur where assets and liabilities appear under one category in the opening balance sheet and another in the closing balance sheet. Examples include changes in land use and conversions of dwellings to commercial use or vice versa. In the case of land, both entries (a negative entry for the old category, a positive one for the new category) are made with the same value. Any change in land value resulting from this change in use is recorded as a volume change rather than a revaluation and, hence, as an economic appearance of assets or economic disappearance of non-produced assets.

6.22 Appearance or disappearance of monetary gold held in the form of gold bullion cannot be created by a financial transaction but enters or leaves the system through other changes in the volume of assets.

6.23 A special case of a change in classification occurs for gold bullion. Gold bullion can be a financial asset known as monetary gold, or a valuable known as non-monetary gold, depending on the holder and the motivation for the holding. Monetisation is the change in the classification of gold bullion from non-monetary to monetary. Demonetisation is the change in the classification of gold bullion from monetary to non-monetary.

6.24 Operations in relation to gold bullion are recorded as follows.

(a) When a monetary authority sells gold bullion that is a reserve asset to a non-resident institutional unit that is not a monetary authority or to a resident institutional unit, a transaction in non-monetary gold is recorded. Demonetisation of gold as a change in the classification of gold bullion from monetary to non-monetary occurs immediately before the transaction and is recorded as other changes in the volume of assets of the monetary authority.

(b) When a monetary authority purchases gold bullion from a non-resident or a resident institutional unit for its reserve assets and that gold is not already a reserve asset, a transaction in non-monetary gold is recorded. Monetisation of gold as a change in the classification of gold bullion from non-monetary to monetary occurs immediately after the transaction and is recorded as other changes in the volume of assets of the monetary authority.

(c) When buyer and seller are monetary authorities of different economies and both hold the gold bullion as part of their reserve assets, there is a transaction in gold bullion, which is recorded in the financial account.

(d) In other cases, gold bullion is non-monetary at all times and transactions in non-monetary gold are recorded.

The above cases relating to a monetary authority also apply to an international financial organisation.

6.25 Changes in classification of assets and liabilities do not include the conversion of debt securities into shares, which is recorded as two financial transactions.

Nominal holding gains and losses (K.7)

6.26 The revaluation account records the nominal holding gains and losses accruing during an accounting period to the owners of assets and liabilities, reflecting changes in the level and structure of their prices. Nominal holding gains and losses (K.7) comprise neutral holding gains and losses (K.71) and real holding gains and losses (K.72).

6.27 *Definition:* the nominal holding gains and losses (K.7) that relate to an asset are the increases or decreases in the asset's value accruing to its economic owner as a result of increases or decreases in its price. The nominal holding gains and losses that relate to a financial liability are the decreases or increases in the liability's valuation as a result of decreases or increases to its price.

6.28 A holding gain arises from an increase in the value of an asset or from a decrease in the value of a liability. A holding loss arises from a decrease in the value of an asset or an increase in the value of a liability.

6.29 The nominal holding gains and losses recorded in the revaluation account are those accruing on assets or liabilities, whether realised or not. A holding gain is said to be realised when the asset in question is sold, redeemed, used or otherwise disposed of, or the liability repaid. An unrealised gain is one accruing on an asset that is still owned or a liability that is still outstanding at the end of the accounting period. A realised gain is usually understood as the gain realised over the entire period over which the asset is owned or liability outstanding whether this period coincides with the accounting period or not. However, as holding gains and losses are recorded on an accruals basis, the distinction between realised and unrealised gains and losses, although useful for some purposes, does not appear in the classifications and accounts.

6.30 Holding gains and losses include the gains and losses on all kinds of non-financial assets, financial assets and liabilities. Thus, holding gains and losses on inventories of all kinds of goods held by producers, including work-in-progress, are also covered.

6.31 Nominal holding gains and losses may accrue on assets held or liabilities incurred for any length of time during the accounting period and not merely on assets or liabilities that appear in the opening and/or closing balance sheets. The nominal holding gains and losses accruing to the owner of a particular asset or liability, or given quantity of a specific type of asset or liability, between two points of time is defined as 'the current value of that asset or liability at the later point of time minus the current value of that asset or liability at the earlier point of time', assuming that the asset or liability itself does not change, qualitatively or quantitatively, during that time.

6.32 The nominal holding gain (G) accruing on a given quantity q of some asset between times o and t can be expressed as follows: $G = (p_t - p_o) \times q$,

where p_o and p_t are the prices of the asset at times o and t respectively. For financial assets and liabilities with fixed current values in the national currency, p_o and p_t are unity by definition and the nominal holding gain are always zero.

6.33 To calculate nominal holding gains and losses, acquisitions and disposals of assets must be valued in the same way they are recorded in the capital and financial accounts and stocks of assets must be valued in the same way they are recorded in the balance sheet. In the case of fixed assets, the value of an acquisition is the amount paid by the purchaser to the producer, or seller, plus the associated costs of ownership transfer incurred by the purchaser. The value of a disposal of an existing fixed asset is the amount received by the seller from the purchaser minus the costs of ownership transfer incurred by the seller.

6.34 An exception to the case described in paragraph 6.33 is where the price paid differs from the market value of the asset. In this case, a capital transfer is imputed for the difference between the price paid and the market value and the acquisition is recorded at market value. This particularly occurs in transactions involving non-market sectors.

6.35 Four different situations leading to nominal holding gains and losses are distinguished:

(a) an asset held throughout the accounting period: the nominal holding gain accruing during the accounting period is equal to the closing balance sheet value minus the opening balance sheet value minus any consumption of fixed capital in the accounting period. These values are the estimated values of the assets if they were to be acquired at the times the balance sheets are drawn up. The nominal gain is unrealised;

(b) an asset held at the beginning of the period that is sold during the period: the nominal holding gain accruing is equal to the value at disposal minus the opening balance sheet value minus any consumption of fixed capital in the accounting period that occurs prior to the sale. The nominal gain is realised;

(c) an asset acquired during the period and still held at the end of the period: the nominal holding gain accruing is equal to the closing balance sheet value minus the value at acquisition minus any consumption of fixed capital in the accounting period. The nominal gain is unrealised; and

(d) an asset acquired and disposed of during the accounting period: the nominal holding gain accruing is equal to the value at disposal minus the value at acquisition minus any consumption of fixed capital in the accounting period between acquisition and disposal. The nominal gain is realised.

6.36 The nominal holding gains and losses included are those accruing on assets and liabilities, whether realised or not. They are recorded in the revaluation account of the sectors involved, the total economy and the rest of the world.

Neutral holding gains and losses (K.71)

6.37 *Definition:* the neutral holding gains and losses (K.71) relate to assets and liabilities and are the value of the holding gains and losses that accrue if the price of the asset or liability changes over time in the same proportion as the general price level.

6.38 Neutral holding gains and losses are identified to facilitate the derivation of real holding gains and losses, which redistribute real purchasing power between sectors.

6.39 Let the general price index be denoted by r. The neutral holding gain (NG) on a given quantity q of an asset between times o and t is then given by the following expression: $NG = p_o \times q\,(r_t/r_o - 1)$,

where $p_o \times q$ is the current value of the asset at time o and r_t/r_o the factor of the change in the general price index between times o and t. The same term r_t/r_o is applied to all assets and liabilities.

6.40 The general price index to be applied for the calculation of neutral holding gains and losses is a price index for final expenditure.

6.41 Neutral holding gains and losses are recorded in the neutral holding gains and losses account, which is a subaccount of the revaluation account of the sectors, the total economy and the rest of the world.

Real holding gains and losses (K.72)

6.42 *Definition:* the real holding gains and losses (K.72) relate to an asset or liability and are the difference between the nominal and the neutral holding gains and losses on that asset.

6.43 The real holding gain (RG) on a given quantity q of an asset between times o and t is given by:

$RG = G - NG$

or $RG = (p_t/p_o - r_t/r_o) \times p_o \times q$.

6.44 The values of the real holding gains and losses on assets and liabilities thus depend on the movements of their prices over the period in question, relative to movements of other prices, on average, as measured by the general price index.

6.45 Real holding gains and losses are recorded in the real holding gains and losses account, which is a subaccount of the revaluation account.

Holding gains and losses by types of financial asset and liability

Monetary gold and SDRs (AF.1)

6.46 As the price of monetary gold is usually quoted in US dollars, the value of monetary gold is subject to nominal holding gains and losses through changes in the exchange rate as well as the price of the gold itself.

6.47 As the SDRs represent a basket of currencies, its value in national currency terms, and so the value of the holding gains and losses, varies with the exchange rates of the currencies in the basket against the national currency.

Currency and deposits (AF.2)

6.48 The current values of currency and deposits denominated in national currency remain constant over time. The ‘price’ of such an asset is always unity while the quantity is given by the number of units of the currency in which they are denominated. The nominal holding gains and losses on such assets are always zero. For this reason, the difference between the values of the opening and closing stocks of such assets is, with the exception of other changes in volume, entirely accounted for by the values of the transactions in the assets. This is a rare case where it is normally possible to deduce the transactions from the changes in balance sheet figures.

6.49 The interest accruing on deposits is recorded in the financial account as being simultaneously reinvested as deposits.

6.50 Holdings of foreign currency and deposits denominated in other currencies will register nominal holding gains and losses due to changes in exchange rates.

6.51 In order to calculate the neutral and real holding gains and losses on assets of fixed current value, data on the times and values of transactions are needed as well as the opening and closing balance sheet values. Suppose, for example, a deposit is made and withdrawn within the accounting period while the general price level is rising. The neutral gain on the deposit is positive and the real gain negative, the amount depending upon the length of time the deposit is outstanding and the rate of inflation. It is impossible to record such real losses without data on the value of the transactions during the accounting period and the times at which they are made.

6.52 In general, it may be inferred that if the total absolute value of the positive and negative transactions is large in relation to the opening and closing balance sheet levels, approximate estimates of the neutral and real holding gains and losses on financial assets and liabilities with fixed current values derived from balance sheet data alone may not be very satisfactory. Even recording the values of financial transactions on a gross basis, i.e. recording deposits made and withdrawn separately as distinct from the total value of deposits minus withdrawals, may not be sufficient without information on the timing of the deposits.

Debt securities (AF.3)

6.53 When a long-term debt security, such as a bond, is issued at premium or discount, including deep discounted and zero coupon bonds, the difference between its issue price and its face or redemption value when it matures measures interest that the issuer is obliged to pay over the life of the debt security. Such interest is recorded as property income payable by the issuer of the long-term debt security and receivable by the holder of the debt security, in addition to any coupon interest actually paid by the issuer at specified intervals over the life of the debt security.

6.54 The interest accruing is recorded in the financial account as being simultaneously reinvested in the debt security by the holder of the debt security. It is therefore recorded in the financial account as the acquisition of an asset, which is added to the existing asset. Thus the gradual increase in the market value of a long-term debt security that is attributable to the accumulation of accrued reinvested interest reflects a growth in the principal outstanding — that is, in the size of the asset. It is essentially a quantum or volume increase and not a price increase. It does not generate any holding gain for the holder of the long-term debt security or a holding loss for the issuer. Debt securities change qualitatively over time as they approach maturity and it is essential to recognise that increases in their values due to the accumulation of accrued interest are not price changes and do not generate holding gains.

6.55 The prices of fixed-interest long-term debt securities also change, however, when the market rates of interest change, the prices varying inversely with the interest rate movements. The impact of a given interest rate change on the price of an individual long-term debt security is lower the closer the security is to maturity. Changes in prices of long-term debt securities that are attributable to changes in market rates of interest constitute price and not quantum changes. They, therefore, generate nominal holding gains and losses for both the issuers and the holders of the debt securities. An increase in interest rates generates a nominal holding gain for the issuer of the debt security and an equal nominal holding loss for the holder, and vice versa in the case of a fall in interest rates.

6.56 Variable interest rate debt securities have their coupon or principal payments linked to a general price index for goods and services, such as the consumer price index, an interest rate such as the Euribor, the Libor or a bond yield, or an asset price.

When the amounts of the coupon payments and/or the principal outstanding are linked to a general or broad price index, the change in the value of the principal outstanding between the beginning and the end of a particular accounting period due to the movement in the relevant index is treated as interest accruing in that period, in addition to any interest due for payment in that period.

When indexation of the amounts to be paid at maturity includes a holding gain motive, typically indexation based on a single, narrowly defined item, any deviation of the underlying index from the originally expected path leads to holding gains or losses, which will not normally cancel out over the life of the instrument.

6.57 Nominal holding gains and losses may accrue on short-term debt securities in the same way as for long-term debt securities. However, as short-term debt securities have much shorter times to maturity, the holding gains generated by interest rate changes are generally much smaller than on long-term debt securities with the same face values.

Loans (AF.4)

6.58 The same situation as for currency and deposits applies for loans that are not traded. However, when an existing loan is sold to another institutional unit, the write-down of the loan, which is the difference between the redemption price and the transaction price, is recorded under the revaluation account of the seller and the purchaser at the time of transaction.

Equity and investment fund shares (AF.5)

6.59 Bonus shares increase the number of shares and the nominal value of the shares issued but do not by themselves alter the market value of the totality of shares. This also applies for a stock dividend which is a pro-rata distribution of additional shares of a corporation's stock to owners of the common stock. Bonus shares and stock dividends do not enter the accounts at all. However, such issues are designed to improve the liquidity of the shares on the market and hence the total market value of shares issued may rise as a result: any such change is recorded as a nominal holding gain.

Insurance, pension and standardised guarantee schemes (AF.6)

6.60 When the reserves and entitlements for insurance, pension and standardised guarantee schemes are denominated in national currency, there are no nominal holding gains and losses, just as there are none for currency or deposits and loans. The assets used by the financial institutions to meet the commitments are subject to holding gains and losses.

6.61 The liabilities to policy holders and beneficiaries change as a result of transactions, other volume changes and revaluations. Revaluations are due to changes of key model assumptions in the actuarial calculations. Those assumptions are the discount rate, the wage rate and the inflation rate.

Financial derivatives and employee stock options (AF.7)

6.62 The value of financial derivatives may change as a result of changes in the value of the underlying instrument, changes in the volatility of the price of the underlying instrument, or approaching the date of execution or maturity. All such changes in value to financial derivatives and employee stock options are to be regarded as price changes and recorded as a revaluation.

Other accounts receivable/payable (AF.8)

6.63 The same situation as for domestic currency, deposits and loans applies for other accounts receivable/payable, which are not traded. However, when an existing trade credit is sold to another institutional unit the difference between the redemption price and the transaction price is recorded as revaluation at the time of transaction. Nonetheless, as trade credit generally has a short-term nature, the sale of a trade credit might imply the creation of a new financial instrument.

Assets denominated in foreign currency

6.64 The value of assets and liabilities denominated in foreign currency is measured by their current market value in foreign currency converted into national currency at the current exchange rate. Nominal holding gains and losses may therefore occur from both changes in the price of the asset and the exchange rate. The total value of the nominal holding gains and losses accruing over the accounting period is calculated by subtracting the value of transactions and other volume changes from the difference between the opening and closing balance sheet values. For this purpose, transactions in assets and liabilities denominated in foreign currency are converted into the national currency using the exchange rates at the time the transactions occur, while the opening and closing balance sheet values are converted using the exchange rates prevailing at the dates to which the balance sheets relate. This implies that the total value of the transactions as net acquisitions — acquisitions less disposals — expressed in foreign currency is, in effect, converted by a weighted average exchange rate in which the weights are given the values of transactions conducted on different dates.

CHAPTER 7

Balance sheets

7.01. *Definition:* a balance sheet is a statement, drawn up for a particular point in time, of the values of assets economically owned and of liabilities owed by an institutional unit or group of units.

7.02 The balancing item of a balance sheet is called net worth (B.90). The stock of the assets and liabilities recorded in the balance sheet are valued at the appropriate prices, which are usually the market prices prevailing on the date to which the balance sheet relates, but for some categories at their nominal values. A balance sheet is drawn up for resident institutional sectors and subsectors, the total national economy and the rest of the world.

7.03 The balance sheet completes the sequence of accounts, showing the ultimate effect of the entries in the production, distribution and use of income, and accumulation accounts on the stock of wealth of an economy.

7.04 For institutional sectors the balancing item on the balance sheet is net worth.

7.05 For the total national economy the balancing item is often referred to as national wealth — the total value of non-financial assets, and net financial assets with respect to the rest of the world.

7.06 The rest of the world balance sheet is compiled in the same manner as the balance sheets of the resident institutional sectors and subsectors. It consists entirely of positions in financial assets and liabilities of non-residents vis-à-vis residents. In the BPM6 the corresponding balance sheet drawn from the viewpoint of residents vis-à-vis non-residents is called the international investment position (IIP).

7.07 Own funds are defined as the sum of net worth (B.90) plus the value of equity and investment fund shares (AF.5) as liabilities in the balance sheet.

7.08 For the non-financial corporations and financial corporations sectors and subsectors, own funds is an analytically meaningful indicator similar to net worth.

7.09 The net worth of corporations will usually be different from the value of their shares and other equity issued. Quasi-corporations' net worth is zero because the value of their owner's equity is assumed to be equal to its assets less its non-equity liabilities. The net worth of resident direct investment enterprises, which are branches of non-resident enterprises and treated as quasi-corporations, is therefore also zero.

7.10 The balancing item of financial assets and liabilities is called financial net worth (BF.90).

7.11 A balance sheet relates to the value of assets and liabilities at a particular moment of time. Balance sheets are compiled at the beginning and end of an accounting period; the opening balance sheet at the beginning of the period is the same as the closing balance sheet recorded at the end of the preceding period.

7.12 A basic accounting identity links the value of the stock of a specific type of an asset as shown in the opening balance sheet and the closing balance sheet as follows:

the value of the stock of a specific type of asset in the opening balance sheet		
plus	transactions	the total value of that asset acquired in transactions that take place during the accounting period
minus		the total value of that asset disposed of in transactions that take place during the accounting period
minus		consumption of fixed capital (if applicable)
plus	other changes in the volume of assets	other positive changes in volume affecting that asset
minus		other negative changes in volume affecting that asset
plus	revaluations	the value of nominal holding gains accruing during the period resulting from changes in the price of that asset
minus		the value of nominal holding losses accruing during the period resulting from changes in the price of that asset
equals the value of the stock of that asset in the closing balance sheet.		

A table can also be drawn up, which links the value of the stock of a specific type of a liability in the opening balance sheet and the closing balance sheet.

7.13 The accounting links between the opening balance sheet and the closing balance sheet via transactions, other changes in the volume of assets and liabilities, and holding gains and losses are shown schematically in Annex 7.2.

Types of assets and liabilities

Definition of an asset

7.14 The assets recorded in the balance sheets are economic assets.

7.15 *Definition:* an economic asset is a store of value representing the benefits accruing to the economic owner by holding or using the entity over a period of time. It is a means of carrying forward value from one accounting period to another.

7.16 The economic benefits consist of primary incomes such as operating surplus, where the economic owner uses the asset, or property income, where the economic owner lets others use it. The benefits are derived from the use of the asset and the value, including holding gains and losses, that is realised by disposing of the asset or terminating it.

7.17 The economic owner of an asset is not necessarily the legal owner. The economic owner is the institutional unit entitled to claim the benefits associated with the use of the asset by virtue of accepting the associated risks.

7.18 An overview of the classification and coverage of economic assets is given in Table 7.1. The detailed definition of each asset category is set out in Annex 7.1.

Exclusions from the asset and liability boundary

7.19 Excluded from the asset and liability boundary are:

(a) human capital;

(b) natural assets that are not considered as economic assets (e.g. air, river water);

(c) consumer durables; and

(d) contingent assets and liabilities, which are not financial assets and liabilities (see paragraph 7.31).

Categories of assets and liabilities

7.20 Two main categories of entries in the balance sheets are distinguished: non-financial assets (denoted as AN) and financial assets and liabilities (denoted as AF).

7.21 Non-financial assets are divided into produced non-financial assets (denoted as AN.1) and non-produced non-financial assets (denoted as AN.2).

Produced non-financial assets (AN.1)

7.22 *Definition:* produced non-financial assets (AN.1) are outputs from production processes.

7.23 The classification of produced non-financial assets (AN.1) is designed to distinguish among assets on the basis of their role in production. It consists of: fixed assets which are used repeatedly or continuously in production for more than one year; inventories which are used up in production as intermediate consumption, sold or otherwise disposed of; and valuables. Valuables are not used primarily for production or consumption, but are instead acquired and held primarily as stores of value.

Non-produced non-financial assets (AN.2)

7.24 *Definition:* non-produced non-financial assets (AN.2) are economic assets that come into existence other than through processes of production. They consist of natural assets, contracts, leases, licences, permits, and goodwill and marketing assets.

7.25 The classification of non-produced assets is designed to distinguish assets on the basis of how they come into existence. Some of these assets exist naturally, while others, which are known as constructs of society, come into existence by legal or accounting actions.

7.26 The choice of which natural assets to include in the balance sheet is determined, in compliance with the general definition of an economic asset, by whether the assets are subject to effective economic ownership and are capable of bringing economic benefits to their owners, given the existing technology, knowledge, economic opportunities, available resources, and set of relative prices. Natural assets where ownership rights have not been established, such as open seas or air, are excluded.

7.27 Contracts, leases, licences and permits are regarded as non-financial assets only when a legal agreement confers economic benefits on the holder in excess of amounts payable under the agreement, and the holder can legally and practically realise such benefits by transferring them to others.

Financial assets and liabilities (AF)

7.28 *Definition:* financial assets (AF) are economic assets, comprising all financial claims, equity and the gold bullion component of monetary gold (paragraph 5.03). Liabilities are established when debtors are obliged to provide a payment or a series of payments to creditors (paragraph 5.06).

7.29 Financial assets are stores of value representing a benefit or series of benefits accruing to the economic owner through holding or using the assets over a period of time. They are a means of carrying forward value from one accounting period to another. Benefits are exchanged through means of payments (paragraph 5.04).

7.30 Each financial asset has a counterpart liability, with the exception of the gold bullion component of monetary gold, which is classified in the monetary gold and special drawing rights (AF.1) category.

7.31 Contingent assets and contingent liabilities are agreements whereby one party is obliged to provide a payment or series of payments to another unit only if certain specific conditions prevail (paragraph 5.08). They are not financial assets and liabilities.

7.32 The classification of financial assets and liabilities corresponds to the classification of financial transactions (paragraph 5.14). The definitions of the categories and subcategories of financial assets and liabilities and the supplementary explanations are provided in Chapter 5 and not repeated here but Annex 7.1 contains a summary of all assets and liabilities defined in the system.

Table 7.1 — Classification of assets

AN.	NON-FINANCIAL ASSETS (AN.1 + AN.2)
AN.1	Produced non-financial assets
AN.11	Fixed assets[1]
AN.111	Dwellings
AN.112	Other buildings and structures
AN.1121	Buildings other than dwellings
AN.1122	Other structures
AN.1123	Land improvements
AN.113	Machinery and equipment
AN.1131	Transport equipment
AN.1132	ICT equipment
AN.1139	Other machinery and equipment
AN.114	Weapons systems
AN.115	Cultivated biological resources
AN.1151	Animal resources yielding repeat products
AN.1152	Tree, crop and plant resources yielding repeat products
AN.117	Intellectual property products
AN.1171	Research and development
AN.1172	Mineral exploration and evaluation
AN.1173	Computer software and databases
AN.11731	Computer software
AN.11732	Databases
AN.1174	Entertainment, literary or artistic originals
AN.1179	Other intellectual property products
AN.12	Inventories
AN.121	Materials and supplies
AN.122	Work-in-progress
AN.1221	Work-in-progress on cultivated biological assets
AN.1222	Other work-in-progress
AN.123	Finished goods
AN.124	Military inventories
AN.125	Goods for resale
AN.13	Valuables
AN.131	Precious metals and stones
AN.132	Antiques and other art objects
AN.133	Other valuables
AN.2	Non-produced non-financial assets
AN.21	Natural resources
AN.211	Land
AN.2111	Land underlying buildings and structures

AN.	NON-FINANCIAL ASSETS (AN.1 + AN.2)
AN.2112	Land under cultivation
AN.2113	Recreational land and associated surface water
AN.2119	Other land and associated surface water
AN.212	Mineral and energy reserves
AN.213	Non-cultivated biological resources
AN.214	Water resources
AN.215	Other natural resources
AN.2151	Radio spectra
AN.2159	Other
AN.22	Contracts, leases and licences
AN.221	Marketable operating leases
AN.222	Permits to use natural resources
AN.223	Permits to undertake specific activities
AN.224	Entitlement to future goods and services on an exclusive basis
AN.23	Purchases less sales of goodwill and marketing assets

[1] Memorandum item AN.m: consumer durables.

AF	FINANCIAL ASSETS[2] (AF.1 + AF.2 + AF.3 + AF.4 + AF.5 + AF.6 + AF.7 + AF.8)
AF.1	Monetary gold and special drawing rights (SDRs)
AF.11	Monetary gold
AF.12	Special drawing rights (SDRs)
AF.2	Currency and deposits
AF.21	Currency
AF.22	Transferable deposits
AF.29	Other deposits
AF.3	Debt securities
AF.31	Short-term
AF.32	Long-term
AF.4	Loans
AF.41	Short-term
AF.42	Long-term
AF.5	Equity and investment fund shares or units
AF.51	Equity
AF.511	Listed shares
AF.512	Unlisted shares
AF.519	Other equity
AF.52	Investment fund shares or units
AF.521	MMF shares/units
AF.522	Non-MMF investment fund shares/units
AF.6	Insurance, pension and standardised guarantee schemes

AF	FINANCIAL ASSETS[2] (AF.1 + AF.2 + AF.3 + AF.4 + AF.5 + AF.6 + AF.7 + AF.8)
AF.61	Non-life insurance technical reserves
AF.62	Life insurance and annuity entitlements
AF.63	Pension entitlements
AF.64	Claims of pension funds on pension managers
AF.65	Entitlements to non-pension benefits
AF.66	Provisions for calls under standardised guarantees
AF.7	Financial derivatives and employee stock options
AF.71	Financial derivatives
AF.72	Employee stock options
AF.8	Other accounts receivable/payable
AF.81	Trade credits and advances
AF.89	Other accounts receivable/payable, excluding trade credit and advances

[2] Memorandum items AF.m1: foreign direct investment; AF.m2: non-performing loans.

Valuation of entries in the balance sheets

General valuation principles

7.33 Each item in the balance sheet is valued as if it were being acquired on the date to which the balance sheet relates. Assets and liabilities are valued at market prices on the date to which the balance sheet relates.

7.34 The values recorded should reflect prices observable on the market on the date to which the balance sheet relates. When there are no observable market prices, which may be the case if there is a market but no assets have recently been sold on it, estimates should be made of what the price would be if the assets were acquired on the market on the date to which the balance sheet relates.

7.35 Market prices are usually available for many financial assets and liabilities, existing real estate (buildings and other structures plus the underlying land), existing transport equipment, crops and livestock, as well as for newly produced fixed assets and inventories.

7.36 Non-financial assets produced on own-account should be valued at basic prices or, if basic prices are not available, at the basic prices of similar goods, or, if this is not possible, at cost.

7.37 In addition to observed market prices, estimates based on observed prices or costs incurred, values of non-financial assets may be estimated by:

(a) revaluing and accumulating acquisitions less disposals over the assets' lifetimes; or

(b) the present value, i.e. the discounted value, of future economic benefits.

7.38 Market valuation is the key principle for valuing positions (and transactions) in financial instruments. Financial instruments are identical to financial claims. They are financial assets that have corresponding liabilities. The market value is that at which financial assets are acquired or disposed of, between willing parties, on the basis of commercial considerations only, excluding commissions, fees and taxes. In determining market values, trading parties also take account of accrued interest.

7.39 Nominal valuation reflects the sum of funds originally advanced, plus any subsequent advances, less any repayments, plus any accrued interest. Nominal value is not the same as face value.

(a) The nominal value in domestic currency of a financial instrument denominated in foreign currency includes holdings gains or losses arising from movements in exchange rates.

The value of financial instruments denominated in foreign currency should be converted into the national currency at the market exchange rate prevailing on the date to which the balance sheet relates. This rate should be the mid-point between the buying and the selling spot rates for currency transactions.

(b) For financial instruments like debt securities linked to a narrow index, the nominal value can also include holding gains or losses arising from movements in the index.

(c) At any specific point in time, the market value of a financial instrument may deviate from its nominal value due to revaluations arising from market price changes. Movements in market prices arise from general market conditions, such as changes in the market rate of interest, specific circumstances, such as changes in the perceived creditworthiness of the issuer of a debt security, and changes in general market liquidity and in market liquidity that is specific to that debt security.

(d) Thus, the following basic equation applies to positions:

market value = nominal value + revaluations arising from market price changes.

7.40 For some non-financial assets, the revalued initial acquisition price reduces to zero over the asset's expected life. The value of such an asset, at any particular point of time, is given by its current acquisition price less the accumulated value of such reductions.

7.41 Most fixed assets can be recorded in balance sheets at current purchasers' prices reduced for the accumulated consumption of fixed capital; this is known as the written-down replacement cost. The sum of the reduced values of all fixed assets still in use is described as the net capital stock. The gross capital stock includes the values of the accumulated consumption of fixed capital.

Non-financial assets (AN)

Produced non-financial assets (AN.1)

Fixed assets (AN.11)

7.42 Fixed assets are recorded at market prices if possible (or basic prices in the case of own-account production of new assets) or, if not possible, then at purchasers' prices at acquisition reduced by the accumulated consumption of fixed capital. The purchasers' costs of transferring ownership of fixed assets, appropriately reduced through consumption of fixed capital over the period the purchaser expects to hold the economic asset, are included in the balance sheet value.

Intellectual property products (AN.117)

7.43 Mineral exploration and evaluation (category AN.1172) are valued either on the basis of the accumulated amounts paid to other institutional units conducting the exploration and evaluation, or on the basis of the costs incurred for exploration undertaken on own-account. That part of exploration undertaken in the past that has not yet been fully reduced should be revalued at the prices and costs of the current period.

7.44 Originals of intellectual property products, such as computer software and entertainment, literary or artistic originals should be valued at the acquisition price when traded on markets. The initial value is estimated by summing their costs of production, appropriately revalued to the prices of the current period. If it is not possible to establish the value by this method, the present value of expected future receipts arising from using the asset is estimated.

Costs of ownership transfer on non-produced assets (AN.116)

7.45 The costs of ownership transfer on non-produced assets other than land are shown separately in the capital account, and treated as gross fixed capital formation, but in the balance sheets such costs are incorporated in the value of the asset to which they relate even though the asset is non-produced. Thus, there are no costs of ownership transfer shown separately in the balance sheets. The costs of ownership transfer on financial assets are treated as intermediate consumption, where the assets are acquired by corporations or government, final consumption where the assets are acquired by households and exports of services where the assets are acquired by non-residents.

Inventories (AN.12)

7.46 Inventories should be valued at prices prevailing on the date to which the balance sheet relates, and not at the prices at which the products were valued when they entered inventory.

7.47 Inventories of materials and supplies are valued at purchasers' prices, and inventories of finished goods and work-in-progress are valued at basic prices. Inventories of goods intended for resale without further processing by distributors are valued at the prices prevailing on the date to which the balance sheet relates, excluding any transportation costs incurred by the wholesalers or retailers. For inventories of work-in-progress, the value of the closing balance sheet is estimated by applying the fraction of the total production cost incurred by the end of the period to the basic price of a similar finished product on the date to which the balance sheet relates. If the basic price of the finished products is unavailable, it is estimated by the value of the production cost with a mark-up for expected net operating surplus or estimated net mixed income.

7.48 Single-use crops (except timber) under cultivation and livestock raised for slaughter can be valued by reference to the prices of such products on the markets. Standing timber is valued by discounting the future proceeds of selling the timber at current prices after deducting the expenses of bringing the timber to maturity, felling, etc.

Valuables (AN.13)

7.49 Valuables such as works of art, antiques, jewellery, precious stones, non-monetary gold and other metals are valued at current prices. If organised markets exist for these assets, they should be valued at the actual or estimated prices they would fetch, excluding any agents' fees or commissions, if sold on the market on the date to which the balance sheet relates. Otherwise, they should be valued at acquisition prices, revalued to the current price level.

Non-produced non-financial assets (AN.2)

Natural resources (AN.21)

Land (AN.211)

7.50 In the balance sheet land is valued at its current market price. Any expenditure on land improvements is recorded as gross fixed capital formation and the additional value it provides is excluded from the value of land shown in the balance sheet and is instead shown in a separate asset category for land improvement (AN.1123).

7.51 Land is valued at the estimated price achieved if sold on the market, excluding the costs involved in transferring ownership for a future sale. When a transfer does occur, it is recorded by convention as gross fixed capital formation and the costs are excluded from the AN.211 land value recorded in the balance sheet and instead recorded as an AN.1123 asset. This is reduced to zero through consumption of fixed capital over the period that the new owner expects to use the land.

7.52 If the value of the land cannot be separated from that of buildings or other structures situated on it, the combined assets are classified together in the category of the asset that has the greater value.

Mineral and energy reserves (AN.212)

7.53 Reserves of mineral deposits located on or below the earth's surface, that are economically exploitable given current technology and relative prices, are valued at the present value of expected net returns resulting from their commercial exploitation of the assets.

Other natural assets (AN.213, AN.214 and AN.215)

7.54 Observed market prices for non-cultivated biological resources (AN.213), water resources (AN.214) and other natural resources (AN.215) are unlikely to be available, so they are usually valued at the present value of future returns expected from them.

Contracts, leases and licences (AN.22)

7.55 *Definition:* contracts, leases and licences are recorded as assets when the following conditions are met:

(a) the terms of the contract, lease or licence specify a price for the use of an asset or provision of a service that differs from the prevailing market price; and

(b) one party to the contract can realise the price difference.

The contracts, leases and licences can be valued by taking market information from the transfers of the instruments conferring the rights, or estimated as the present value of expected future returns at the balance sheet date compared to the situation when the legal agreement starts.

7.56 The category covers assets that may arise from marketable operating leases, licences to use natural resources, permits to undertake specific activities and entitlements to future goods and services on an exclusive basis.

7.57 The value of the asset is equal to the net present value of the excess of the prevailing price over that fixed in the agreement. Other things being equal, this will decline as the period of the agreement expires. Changes in the value of the asset due to changes in the prevailing price are recorded as nominal holding gains and losses.

7.58 Marketable operating lease assets are only recorded as assets when lessees exercise their rights to realise the price difference.

Purchases less sales of goodwill and marketing assets (AN.23)

7.59 The balance sheet value of goodwill and marketing assets is the excess of the price paid at the time an institutional unit is sold, over the value recorded for its own funds, revalued for any subsequent reductions as the initial value is written down as an economic disappearance of non-produced assets (K.2). The rate of write down is in accordance with commercial accounting standards.

7.60 Marketing assets consist of items such as brand names, mastheads, trademarks, logos and domain names.

Financial assets and liabilities (AF)

7.61 Financial assets and liabilities as negotiable financial instruments such as debt securities, equity securities, investment fund shares or units and financial derivatives, are valued at market value. Financial instruments that are non-negotiable are valued at nominal value (see paragraphs 7.38 and 7.39). The counterpart financial assets and liabilities have the same values in the balance sheet. The values should exclude commissions, fees and taxes. Commissions, fees and taxes are recorded as services provided in carrying out the transactions.

Monetary gold and SDRs (AF.1)

7.62 Monetary gold (AF.11) is to be valued at the price established in organised gold markets.

7.63 The value of SDRs (AF.12) is determined daily by the IMF and the rates against domestic currencies are obtainable from foreign exchange markets.

Currency and deposits (AF.2)

7.64 For currency (banknotes and coins — AF.21), the valuation is the nominal value of the currency.

7.65 For deposits (AF.22, AF.29), the values recorded in the balance sheet are nominal values.

7.66 Currency and deposits in foreign currency are converted to domestic currency at the mid-point of the bid and offer spot exchange rates prevailing on the balance sheet date.

Debt securities (AF.3)

7.67 Debt securities are recorded at market value.

7.68 Short-term debt securities (AF.31) are valued at market value. If market values are not available then, provided there are no conditions of high inflation or high nominal interest rates, the market value can be approximated by the nominal value for:

(a) short-term debt securities issued at par; and

(b) short-term discounted debt securities.

7.69 Long-term debt securities (AF.32) are valued at market value, whether they are bonds on which interest is paid regularly or deep-discounted or zero-coupon bonds on which little or no interest is paid.

Loans (AF.4)

7.70 The values to be recorded in the balance sheets of both creditors and debtors are the nominal values irrespective of whether the loans are performing or non-performing.

Equity and investment fund shares/units (AF.5)

7.71 Listed shares (AF.511) are valued at their market values. The same value is adopted for both the asset side and the liability side, although shares and other equity are not, legally, a liability of the issuer, but an ownership right to a share in the liquidation value of a corporation, where the liquidation value is not known in advance.

7.72 Listed shares are valued at a representative mid-market price observed on the stock exchange or other organised financial markets.

7.73 The values of unlisted shares (AF.512), which are not traded on organised markets, should be estimated with reference to either:

(a) the values of quoted shares where appropriate;

(b) the value of own funds; or

(c) discounting forecast profits by applying an appropriate market price to earnings ratio to the smoothed recent earnings of the institutional unit.

However, these estimates will take into account differences between listed and unlisted shares, notably their liquidity and consider the net worth accumulated over the life of the corporation and its branch of business.

7.74 The estimation method applied depends on the basic statistics available. It may take into account, for example, data on merger activities involving unlisted shares. If the value of unlisted corporations' own funds moves similarly, on average and in proportion to their nominal capital, to that of similar corporations with listed shares, then the balance sheet value can be calculated using a ratio. This ratio compares the value of own funds of unlisted corporations to that of listed corporations:

value of unlisted shares = market price of similar listed shares × (own funds of unlisted corporations)/(own funds of similar listed corporations).

7.75 The ratio of share price to own funds may vary with the branch of business. It is preferable to calculate the current price of unlisted shares branch by branch. There may be other differences between listed and unlisted corporations, which can have an effect on the estimation method.

7.76 Other equity (AF.519) is equity that is not in the form of securities. It can include equity in quasi-corporations (such as branches, trusts, limited liability and other partnerships), public corporations, unincorporated funds and notional units (including notional resident units created to reflect non-resident ownership of real estate and natural resources). The ownership of international organisations not in the form of shares is classified as other equity.

7.77 Quasi-corporations' other equity is valued according to their own funds, since their net worth is by convention equal to zero. For other units the most appropriate valuation method from the methods used for unlisted shares should be taken.

7.78 Corporations that issue shares or units may additionally have other equity.

7.79 Investment fund shares or units (AF.52) are valued at market price if they are listed. If unlisted the market value may be estimated as described for unlisted shares. If they are redeemable by the fund itself they are valued at their redemption value.

Insurance, pension and standardised guarantee schemes (AF.6)

7.80 The amounts recorded for non-life insurance technical reserves (AF.61) cover premiums paid but not earned plus the amounts set aside to meet outstanding claims. The latter represent the present value of amounts expected to be paid out in settlement of claims, including disputed claims and an allowance for claims to cover incidents that have occurred but not yet been reported.

7.81 The amounts recorded for life insurance and annuity entitlements (AF.62) represent the reserves needed to meet all expected future claims.

7.82 The amounts recorded for pension entitlements (AF.63) depend on the type of pension scheme.

7.83 In a defined benefit pension scheme the level of pension benefits promised to participating employees is determined by a formula agreed in advance. The liability of a defined benefit pension scheme is equal to the present value of the promised benefits.

7.84 In a defined contribution scheme the benefits paid are dependent on the performance of the assets acquired by the pension scheme. The liability of a defined contribution scheme is the current market value of the funds' assets. The funds' net worth is always zero.

7.85 The value recorded for provisions for calls under standardised guarantees (AF.66) is the expected level of claims less the value of any expected recoveries.

Financial derivatives and employee stock options (AF.7)

7.86 Financial derivatives (AF.71) should be included in the balance sheets at their market value. If market price data are unavailable, for example in the case of over the counter options they should be valued at either the amount required to buy out or to offset the contract or the amount of premium payable.

7.87 For options, the writer of the option is considered to have incurred a counterpart liability representing the cost of buying out the rights of the option holder.

7.88 The market value of options and forwards can switch between positive (asset) and negative (liability) positions depending on price movements in the underlying items and thus they can switch being assets and liabilities for the writers and holders. Some options and forwards operate on margin payments, where profits or losses are settled daily; in these cases the balance sheet value will be zero.

7.89 Employee stock options (AF.72) are valued by reference to the fair value of the equity granted. The fair value is measured at grant date using the market value of equivalent traded options or, if unavailable, using an option pricing model.

Other accounts receivable/payable (AF.8)

7.90 Trade credits and advances (AF.81) and other accounts receivable/payable excluding trade credits and advances (AF.89), which arise due to timing differences between distributive transactions, such as taxes, social contributions, dividends, rents, wages and salaries, and financial transactions, are valued, for both creditors and debtors, at nominal value. Any amounts of taxes and social contributions payable under AF.89 should exclude the amounts unlikely to be collected since they represent a government claim with no value.

Financial balance sheets

7.91 The financial balance sheet shows, on its left side, financial assets and, on its right side, liabilities. The balancing item of the financial balance sheet is financial net worth (BF.90).

7.92 The financial balance sheet of a resident sector or a subsector may be consolidated or non-consolidated. The non-consolidated financial balance sheet shows all the financial assets and liabilities of the institutional units classified in the sector or subsector, including those where the corresponding asset or liability is held within that sector or subsector. The consolidated financial balance sheet eliminates the financial assets and liabilities that have counterparts in the same sector or subsector. The financial balance sheet of the rest of the world is consolidated by definition. As a rule, the accounting entries in the System are not consolidated. Therefore, the financial balance sheet of a resident sector or subsector is to be presented on a non-consolidated basis.

7.93 The from-whom-to-whom financial balance sheet (the balance sheet by debtor/creditor) is an extension of the financial balance sheet, showing in addition a breakdown of financial assets by debtor sector and a breakdown of liabilities by creditor sector. Therefore, it provides information on debtor/creditor relationships and is consistent with the financial account by debtor/creditor.

Memorandum items

7.94 In order to show items of more specialised analytic interest for particular sectors, three types of memorandum items are included as supporting items to the balance sheets:

(a) consumer durables (AN.m);

(b) foreign direct investment (AF.m1);

(c) non-performing loans (AF.m2).

Consumer durables (AN.m)

7.95 *Definition:* consumer durables are durable goods used by households repeatedly over periods of time of more than one year for final consumption. They are included in the balance sheets as memorandum items. They are excluded from the main balance sheet because they are recorded as uses in the households sector's use of income account as being consumed in the period of account, and not gradually used up.

7.96 The stocks of consumer durables held by households as final consumers — transport equipment (AN.1131) and other machinery and equipment (AN.1139) — are valued at market prices in the memorandum item, net of the equivalent accumulated charges for consumption of fixed capital. A full list of the subgroups and items of consumer durables is given in Chapter 23.

7.97 Durable goods, such as vehicles, are classified as either fixed assets or as consumer durables depending on the sector classification of the owner and the purpose for which they are used. For example, a vehicle may be used partly by a quasi-corporation for production and partly by a household for final consumption. The values shown in the balance sheet for the non-financial corporations sector (S.11) should reflect the proportion of the use that is attributable to the quasi-corporation. A similar example exists for employers (including own-account workers) subsector (S.141 + S.142). The proportion attributed to the households sector (S.14) as final consumers should be recorded in the memorandum item, net of the equivalent accumulated charges for consumption of fixed capital.

Foreign direct investment (AF.m1)

7.98 Financial assets and liabilities that constitute direct investment are recorded according to the nature of the investment in the categories loans (AF.4), equity and investment fund shares/units (AF.5) or other accounts receivable/payable (AF.8). The amount of direct investment included within each of these categories is recorded as a separate memorandum item.

Non-performing loans (AF.m2)

7.99 Loans are recorded in the balance sheet at nominal value.

7.100 Certain loans that have not been serviced for some time are included as a memorandum item to the balance sheet of the creditor. Such loans are termed non-performing loans.

7.101 *Definition:* a loan is non-performing when (a) payments of interest or principal are 90 days or more past their due date; (b) interest payable of 90 days or more has been capitalised, refinanced, or delayed by agreement; or (c) payments are less than 90 days overdue, but there are other good reasons (such as a debtor filing for bankruptcy) to doubt that payments will be made in full.

7.102 This definition of a non-performing loan is to be interpreted taking into account national conventions on when a loan is deemed to be non-performing. Once a loan is classified as non-performing, it (or any replacement loans) should remain classified as such until payments are received or the principal is written off on this or subsequent loans that replace the original.

7.103 Two memorandum items are required for non-performing loans:

(a) the nominal value of such loans, as recorded in the main balance sheet; and

(b) the market equivalent value of such loans.

7.104 The closest approximation to market equivalent value is fair value, which is 'the value that approximates to the value that would arise from a market transaction between two parties'. Fair value can be established using transactions in comparable instruments, or using the discounted present value of cash flows; which may be available from the balance sheet of the creditor. In the absence of fair value data, the memorandum item will have to use a second-best approach and show nominal value less expected loan losses.

Recording of non-performing loans

7.105 The non-performing loans of the general government and financial corporations sectors must be recorded as memorandum items, along with other sectors that have significant amounts. If significant, the loans to or from the rest of the world, are also recorded as memorandum items.

7.106 The following table describes the positions and flows that are recorded for non-performing loans to show a more complete picture on stocks, transactions, reclassifications and write-offs.

7.107 The example shows an outstanding amount of loans at nominal value of 1 000 at t-1, of which 500 are performing and 500 are non-performing. The majority of the non-performing loans, 400, is covered by loan loss provisions, while 100 are not. The second part of the table provides detailed supplementary information on the market equivalent value of the non-performing loans. It is derived as the difference between the nominal value and the loan loss provisions. At t-1, it is assumed to be 375. During the period from t-1 to t, parts of the loans are reclassified from performing or not yet covered to non-performing or vice versa, or written off. The flows are shown in the corresponding columns of the table. For the loan loss provisions the nominal values and the market equivalent values are also presented.

7.108 The assessments on loan loss provisions have to be made in the framework of the accounting standards, the legal status and the taxation rules applicable to the units, which might lead to rather heterogeneous results in terms of amounts and duration of loan loss provisions. This makes it difficult to record non-performing loans in the main accounts and leads to their recording as a memorandum item. It is preferable instead to provide market equivalent values as memorandum items in addition to the nominal values of loans, performing and non-performing.

Recording of non-performing loans

Positions	Stock	Transaction	Reclassification	Write-off	Stock
	t-1		period t-1 to t		t
		Nominal value			
Loans	1 000	200	0	–90	1 110
Performing loans	500	200	–50		650
Non-performing loans	500		50	–90	460
Covered by loan loss provisions	400		70	–90	380
Not yet covered by loan loss provisions	100		–20		80
		Market equivalent value			
Non-performing loans	375		24	–51	348
= Nominal value	500		50	–90	460
– Loan loss provisions	125		26	–39	112
o/w not yet covered	100		–20		80

Annex 7.1

Summary of each asset category

Classification of assets	Summary
Non-financial assets (AN)	Non-financial items over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding, using or allowing others to use them over a period of time. Consists of fixed assets, inventories, valuables, constructs of society and intellectual property products.
Produced non-financial assets (AN.1)	Non-financial assets that are outputs from production processes. Produced non-financial assets consist of fixed assets, inventories and valuables, as defined below.
Fixed assets (AN.11)	Produced non-financial assets that are used repeatedly or continuously in production processes for more than one year. Fixed assets consist of dwellings, other buildings and structures, machinery and equipment, weapons systems, cultivated biological resources, and intellectual property products, as defined below.
Dwellings (AN.111)	Buildings that are used entirely or primarily as residences, including any associated structures, such as garages, and all permanent fixtures customarily installed in residences. Houseboats, barges, mobile homes and caravans used as principal residences of households are also included, as are public monuments (see AN.1121) identified primarily as dwellings. Costs of site clearance and preparation are also included. Examples include residential buildings, such as one- and two-dwelling buildings and other residential buildings intended for non-transient occupancy. Uncompleted dwellings are included to the extent that the ultimate user is deemed to have taken ownership, either because the construction is on own-account or as evidenced by the existence of a contract of sale/purchase. Dwellings acquired for military personnel are included because they are used, as are dwellings acquired by civilian units, for the production of housing services. The value of dwellings is net of the value of land underlying dwellings, which is included in land (AN.211) if separately classified.
Other buildings and structures (AN.112)	Other buildings and structures consist of buildings other than dwellings, other structures and land improvements, as defined below. Uncompleted buildings and structures are included to the extent that the ultimate user is deemed to have taken ownership, either because the construction is for own use or as evidenced by the existence of a contract of sale/purchase. Buildings and structures acquired for military purposes are included. The value of other buildings and structures is net of the value of land underlying them, which is included in land (AN.211) if separately classified.
Buildings other than dwellings (AN.1121)	Buildings other than dwellings, including fixtures, facilities and equipment that are integral parts of the associated structures and costs of site clearance and preparation. Public monuments (see AN.1122) identified primarily as non-residential buildings are also included. Public monuments are identifiable because of particular historical, national, regional, local, religious or symbolic significance. They are described as public because they are accessible to the general public, not due to public sector ownership. Visitors are often charged for admission to them. Consumption of fixed capital on new monuments, or on major improvements to existing monuments, should be calculated on the assumption of appropriately long service lives. Other examples of buildings other than dwellings include warehouse and industrial buildings, commercial buildings, buildings for public entertainment, hotels, restaurants, educational buildings, health buildings.
Other structures (AN.1122)	Structures other than residential structures, including the costs of the streets, sewers and site clearance and preparation. Also included are public monuments not classified as dwellings or buildings other than dwellings; shafts, tunnels and other structures associated with mining mineral and energy reserves; and the construction of sea-walls, dykes and flood barriers intended to improve land adjacent but not integral to them. Examples include highways, streets, roads, railways and airfield runways; bridges, elevated highways, tunnels and subways; waterways, harbours, dams and other waterworks; long-distance pipelines, communication and power lines; local pipelines and cables, ancillary works; constructions for mining and manufacture; and constructions for sport and recreation.

Classification of assets	Summary
Land improvements (AN.1123)	The value of actions that lead to major improvements in the quantity, quality or productivity of land, or prevent its deterioration. Examples include the increase in asset value arising from land clearance, land contouring, creation of wells and watering holes. Also includes the costs of transfer of ownership of land, which have yet to be written off.
Machinery and equipment (AN.113)	Transport equipment, information and communication technologies (ICT) equipment, and other machinery and equipment, as defined below, other than that acquired by households for final consumption. Tools that are relatively inexpensive and purchased at a relatively steady rate, such as hand tools, may be excluded. Also excluded are machinery and equipment integral to buildings, which are included in dwellings and non-residential buildings. Uncompleted machinery and equipment is excluded, unless produced for own use, because the ultimate user is deemed to take ownership only on delivery of the asset. Machinery and equipment other than weapons systems acquired for military purposes are included. Machinery and equipment such as vehicles, furniture, kitchen equipment, computers, communications equipment, etc., that are acquired by households for final consumption are not treated as an asset. They are instead included in the memorandum item consumer durables in the balance sheet for households. Houseboats, barges, mobile homes and caravans used by households as principal residences are included in dwellings.
Transport equipment (AN.1131)	Equipment for moving people and objects. Examples include products other than parts included in Classification of Products by Activity 2008 (CPA 2008) division 29: motor vehicles, trailers and semi-trailers, and division 30: other transport equipment.
ICT equipment (AN.1132)	Information and communication technologies (ICT) equipment: devices using electronic controls and the electronic components used in the devices. Examples are products within CPA 2008 groups 261: electronic equipment and boards, and 262 computers and peripheral equipment.
Other machinery and equipment (AN.1139)	Machinery and equipment not elsewhere classified. Examples include products other than parts, installation, repair and maintenance services included in CPA 2008 division 26: computer, electronic and optical products (except groups 261 and 262), division 27: electrical equipment, division 28: machinery and equipment n.e.c., division 31: furniture, and division 32: other manufactured goods.
Weapons systems (AN.114)	Vehicles and other equipment such as warships, submarines, military aircraft, tanks, missile carriers and launchers etc. Most single-use weapons they deliver are recorded as military inventories (see AN.124) but others, such as ballistic missiles with highly destructive capability, that are judged to provide ongoing deterrence against aggressors are classified as fixed assets.
Cultivated biological resources (AN.115)	Livestock for breeding, dairy, draught, etc. and vineyards, orchards and other plantations of trees yielding repeat products that are under the direct control, responsibility and management of institutional units, as defined below. Immature cultivated assets are excluded unless produced for own use.
Animal resources yielding repeat products (AN.1151)	Animals whose natural growth and regeneration are under the direct control, responsibility and management of institutional units. They include breeding stocks (including fish and poultry), dairy cattle, draught animals, sheep or other animals used for wool production and animals used for transportation, racing or entertainment.
Tree, crop and plant resources yielding repeat products (AN.1152)	Trees (including vines and shrubs) cultivated for products they yield year after year, including those cultivated for fruits and nuts, for sap and resin and for bark and leaf products, whose natural growth and regeneration are under the direct control, responsibility and management of institutional units.
Intellectual property products (AN.117)	Fixed assets that consist of the results of research and development, mineral exploration and evaluation, computer software and databases, entertainment, literary or artistic originals and other intellectual property products, as defined below, intended to be used for more than one year.
Research and development (AN.1171)	Consists of the value of expenditure on creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and use of this stock of knowledge to devise new applications. The value is determined in terms of the economic benefits expected in the future. Unless the value can be reasonably estimated it is, by convention, valued as the sum of the costs, including those of unsuccessful research and development. Research and development that will not provide a benefit to the owner is not classified as an asset and is instead recorded as intermediate consumption.

Classification of assets	Summary
Mineral exploration and evaluation (AN.1172)	The value of expenditure on exploration for petroleum and natural gas and for non-petroleum deposits and subsequent evaluation of the discoveries made. This expenditure includes pre-licence costs, licence and acquisition costs, appraisal costs and the costs of actual test drilling and boring, as well as the costs of aerial and other surveys, transportation costs, etc, incurred to make it possible to carry out the tests.
Computer software (AN.11731)	Computer programs, program descriptions and supporting materials for both systems and applications software. Included are the initial development and subsequent extensions of software as well as acquisition of copies that are classified as AN.11731 assets.
Databases (AN.11732)	Files of data organised to permit resource-effective access and use of the data. For databases created exclusively for own use the valuation is estimated by costs, which should exclude those for the database management system and the acquisition of the data.
Entertainment, literary or artistic originals (AN.1174)	Original films, sound recordings, manuscripts, tapes, models, etc., on which drama performances, radio and television programmes, musical performances, sporting events, literary and artistic output, etc. are recorded or embodied. Included are works produced on own-account. In some cases, such as films, there may be multiple originals.
Other intellectual property products (AN.1179)	New information, specialised knowledge, etc., not elsewhere classified, whose use in production is restricted to the units that have established ownership rights over them or to other units licensed by such units.
Inventories (AN.12)	Produced assets that consist of goods and services that came into existence in the current period or in an earlier period held for sale, use in production or other use at a later date. They consist of materials and supplies, work-in-progress, finished goods and goods for resale, as defined below. Included are all inventories held by government, including, but not limited to, inventories of strategic materials, grains and other commodities of special importance to the nation.
Materials and supplies (AN.121)	Goods that their owners intend to use as intermediate inputs to their own production processes, not to resell.
Work-in-progress (AN.122)	Goods and services that are partially complete but that are not usually turned over to other units without further processing or that are not mature, and whose production process will be continued in a subsequent period by the same producer. Excluded are partially complete structures for which the ultimate owner is deemed to have taken ownership, either because the production is for own use or as evidenced by the existence of a contract of sale/purchase. Category AN.122 consists of work-in-progress on cultivated assets and other work-in-progress, as defined below.
Work-in-progress on cultivated biological assets (AN.1221)	Livestock raised for products yielded only on slaughter, such as fowl and fish raised commercially, trees and other vegetation yielding once-only products on destruction and immature cultivated assets yielding repeat products.
Other work-in-progress (AN.1222)	Goods other than cultivated assets and services that have been partially processed, fabricated or assembled by the producer but that are not usually sold, shipped or turned over to others without further processing.
Finished goods (AN.123)	Goods that are ready for sale or shipment by the producer.
Military inventories (AN.124)	Ammunition, missiles, rockets, bombs and other single-use military items delivered by weapons or weapons systems. Excludes some types of missiles with highly destructive capability (see AN.114).
Goods for resale (AN.125)	Goods acquired by enterprises, such as wholesalers and retailers, for the purpose of reselling them without further processing (that is, not transformed other than by presenting them in ways that are attractive to the customer).
Valuables (AN.13)	Produced assets that are not used primarily for production or consumption, that are expected to appreciate or at least not to decline in real value, that do not deteriorate over time under normal conditions and that are acquired and held primarily as stores of value. Valuables consist of precious metals and stones, antiques and other art objects and other valuables, as defined below.
Precious metals and stones (AN.131)	Precious metals and stones that are not held by enterprises for use as inputs to processes of production.
Antiques and other art objects (AN.132)	Paintings, sculptures, etc., recognised as works of art and antiques.
Other valuables (AN.133)	Valuables not elsewhere classified, such as collections and jewellery of significant value fashioned out of precious stones and metals.

Classification of assets	Summary
Non-produced non-financial assets (AN.2)	Non-financial assets that come into existence other than through processes of production. Non-produced assets consist of natural resources, contracts, leases and licences, and goodwill and marketing assets, as defined below.
Natural resources (AN.21)	Non-produced assets that naturally occur and over which ownership may be enforced and transferred. Environmental assets over which ownership rights have not, or cannot, be enforced, such as open seas or air, are excluded. Consists of land, mineral and energy reserves, non-cultivated biological resources, water resources and other natural resources, as defined below.
Land (AN.211)	The ground, including the soil covering and any associated surface waters, over which ownership rights are enforced. Excluded are any buildings or other structures situated on it or running through it, cultivated crops, trees and animals; subsoil assets, non-cultivated biological resources and water resources below the ground.
Mineral and energy reserves (AN.212)	Proven reserves of mineral deposits located on or below the earth's surface that are economically exploitable, given current technology and relative prices. Ownership rights to the subsoil assets are usually separable from those to the land itself. Category AN.212 consists of known reserves of coal, oil, gas or other fuels, metallic ores, and non-metallic minerals.
Non-cultivated biological resources (AN.213)	Animal, tree, crop and plant resources that yield both once-only and repeat products over which ownership rights are enforced but for which natural growth and/or regeneration is not under the direct control, responsibility and management of institutional units. Examples are virgin forests and fisheries within the territory of the country. Only those resources that are currently, or are likely soon to be, exploitable for economic purposes should be included.
Water resources (AN.214)	Aquifers and other groundwater resources to the extent that their scarcity leads to the enforcement of ownership and/or use rights, market valuation and some measure of economic control.
Other natural resources (AN.215)	This covers the electromagnetic radio spectrum (AN.2151) and other natural resources (AN.2159) not elsewhere classified.
Radio spectra (AN.2151)	The electromagnetic spectrum. The leases or licences to use the spectrum are classified elsewhere (AN.222) if they meet the definition to be an asset.
Other (AN.2159)	Other natural resources not elsewhere classified.
Contracts, leases and licences (AN.22)	Contractual agreements to undertake activities where the agreement confers economic benefits to the holder in excess of the fees payable and the holder can realise those benefits legally and practically. The asset recorded in category AN.22 represents the realisable potential holding gain value when the market price for the use of an asset or provision of a service exceeds the price prevailing in the contract, lease or licence, or the price that would be achieved in the absence of a contract, lease or licence. Contracts, leases and licences consist of assets that may arise from marketable operating leases, permits to use natural resources, permits to undertake specific activities, and entitlements to future goods and services on an exclusive basis.
Marketable operating leases (AN.221)	Third-party property rights relating to non-financial assets other than natural resources, where the lease confers economic benefits to the holder in excess of the fees payable and the holder can realise those benefits legally and practically, through transferring them. The asset recorded in category AN.221 is the value to the holder of transferring the rights to use the underlying asset, i.e., the excess of the transfer price realisable over the amount payable to the permit issuer. Examples include where a tenant in a building has a fixed rental but the market rate of the rental is higher. If the tenant is able to realise the price difference through subletting, then the rights to realise the value represent a marketable operating lease asset.
Permits to use natural resources (AN.222)	Licences, permits and leases to use natural resources for a limited time that does not fully use up the economic value of the asset, where the agreement confers economic benefits to the holder in excess of the fees payable and the holder can realise those benefits legally and practically, for example through transferring them. The natural resource continues to be recorded on the balance sheet of the owner and a separate asset, representing the value to the holder of transferring the rights to use the resource, is recognised as a permit to use natural resources. The asset recorded is the value to the holder of transferring the rights to use, i.e., the excess of the transfer price above the amount payable to the permit issuer. Examples include where a tenant of land has a fixed rent but the market rate of the rent is higher. If the tenant is able to realise the price difference through subletting, then the rights to realise the value represents an asset.

Classification of assets	Summary
Permits to undertake specific activities (AN.223)	Transferable permits, other than to use natural resources or use an asset belonging to the permit issuer, that restrict the number of units engaging in an activity and allow the holders to earn near-monopoly profits. The asset recorded is the value to the holder of transferring the rights to use, i.e., the excess of the transfer price above the amount payable to the permit issuer. The permit holder must legally and in practice be able to transfer the permit rights to a third party.
Entitlement to future goods and services on an exclusive basis (AN.224)	Transferable contractual rights to the exclusive use of goods or services. One party has a contract to purchase goods or services at a fixed price from a second party and is, legally and in practice, able to transfer the obligation of the second party to a third party. Examples include the transferable value of a football player under contract to a football club and the transferable value of exclusive rights to publishing literary works or musical performances. The asset recorded in AN.224 is the value to the holder of transferring the entitlement.
Purchases less sales of goodwill and marketing assets (AN.23)	The difference between the value paid for an institutional unit as a going concern and the sum of its assets, less the sum of its liabilities, for each item that has been separately identified and valued. The value of goodwill, therefore, includes anything of long-term benefit that has not been separately identified as an asset, as well as the value of the fact that the group of assets is used jointly and is not simply a collection of separable assets. Category AN.23 also includes identified marketing assets, such as brand names, mastheads, trademarks, logos and domain names, when sold individually and separately from a whole corporation.
Financial assets and liabilities (AF)	Financial assets are economic assets comprising financial claims, equity and the gold bullion component of monetary gold. Financial assets are stores of value representing benefits accruing to the economic owner by holding them over a period of time. They are means of carrying forward values from one accounting period to another. Benefits or series of benefits are exchanged by means of payment. Means of payment consist of monetary gold, special drawing rights, currency and transferable deposits. Financial claims, also called financial instruments, are financial assets that have corresponding liabilities. Liabilities are established when debtors are obliged to provide payments or series of payments to creditors.
Monetary gold and SDRs (AF.1)	The financial assets classified in this category have counterpart liabilities in the system except the gold bullion component of monetary gold.
Monetary gold (AF.11)	Gold for which monetary authorities, or others who are subject to the effective control of the monetary authorities, have title and which is held as a reserve asset. It includes gold bullion (including monetary gold held in allocated gold accounts) and unallocated gold accounts with non-residents that give title to claim the delivery of gold.
Special drawing rights (SDRs) (AF.12)	International reserve assets created by the International Monetary Fund (IMF) and allocated to its members to supplement existing reserve assets.
Currency and deposits (AF.2)	Currency in circulation and deposits, both in national and foreign currencies.
Currency (AF.21)	Currency is notes and coins that are issued or authorised by monetary authorities.
Transferable deposits (AF.22)	Deposits exchangeable for currency on demand at par and which are directly usable for making payments by cheque, draft, giro order, direct debit/credit, or other direct payment facility, without penalty or restriction.
Inter-bank positions (AF.221)	Transferable deposits between banks.
Other transferable deposits (AF.229)	Transferable deposits other than inter-bank positions.
Other deposits (AF.29)	Other deposits are deposits other than transferable deposits. Other deposits cannot be used to make payments except on maturity or after an agreed period of notice, and they are not exchangeable for currency or for transferable deposits without some significant restriction or penalty.
Debt securities (AF.3)	Negotiable financial instruments serving as evidence of debt. Negotiability refers to the fact that its legal ownership is readily capable of being transferred from one owner to another by delivery or endorsement. To qualify as negotiable, a debt security must be designed for potential trading on an organised exchange or in the over-the-counter market, though demonstration of actual trading is not required.
Short-term debt securities (AF.31)	Debt securities, the original maturity of which is one year or less and debt securities repayable on demand of the creditor.

Classification of assets	Summary
Long-term debt securities (AF.32)	Debt securities, the original maturity of which is more than one year or of no stated maturity.
Loans (AF.4)	Financial assets created when creditors lend funds to debtors, either directly or through brokers, which are either evidenced by non-negotiable documents or not evidenced by documents.
Short-term loans (AF.41)	Loans the original maturity of which is one year or less and loans repayable on demand of the creditor.
Long-term loans (AF.42)	Loans the original maturity of which is more than one year or no stated maturity.
Equity and investment fund shares or units (AF.5)	Financial assets that represent property rights on corporations or quasi-corporations. Such financial assets generally entitle the holders to a share in the profits of the corporations or quasi-corporations, and to a share in their net assets in the event of liquidation.
Equity (AF.51)	Financial assets that acknowledge claims on the residual value of a corporation or quasi-corporation, after the claims of all creditors have been met.
Listed shares (AF.511)	Equity securities listed on an exchange. Such an exchange may be a recognised stock exchange or any other form of a secondary market. Listed shares are also referred to as quoted shares. The existence of quoted prices of shares listed on an exchange means that current market prices are usually readily available.
Unlisted shares (AF.512)	Equity securities with prices that are not listed on a recognised stock exchange or other form of secondary market.
Other equity (AF.519)	All forms of equity other than those classified in subcategories AF.511 and AF.512.
Investment funds shares/units (AF.52)	Shares, if a corporate structure is used, or units, if a trust structure is used. They are issued by investment funds, which are collective investment undertakings through which investors pool funds for investment in financial and/or non-financial assets.
Money market fund shares/units (AF.521)	Money market fund shares or units are issued by money market funds which are investment funds that invest only or primarily in short-term debt securities such as treasury bills, certificates of deposit, and commercial paper and also in long-term debt securities with a residual short-term maturity. Money market fund shares or units may be transferable and are often regarded as close substitutes for deposits.
Non-MMF investment fund shares/units (AF. 522)	Investment fund shares or units other than money market funds or units represent a claim on a portion of the value of an investment fund other than a money market fund. Investment fund shares or units other than money market fund shares or units are issued by investment funds that invest in a range of assets including debt securities, equity, commodity-linked investments, real estate, shares in other investment funds and structured assets.
Insurance, pension and standardised guarantee schemes (AF.6)	Financial assets of policy holders or beneficiaries and liabilities of insurers, pension funds, or issuers of standardised guarantees.
Non-life insurance technical reserves (AF.61)	Financial assets representing policy holders' claims against non-life insurance companies in the form of unearned premiums paid and claims incurred.
Life insurance and annuity entitlements (AF.62)	Financial assets representing policy and annuity holders' claims against the technical reserves of corporations providing life insurance.
Pension entitlements (AF.63)	Financial assets that both existing and future pensioners hold against either their pension manager, i.e. their employer(s), a scheme designated by the employer(s) to pay pensions as part of a compensation agreement between the employer and employee or a life (or a non-life) insurer.
Claims of pension funds on pension managers (AF.64)	Financial assets representing the claims of pension funds on their pension manager for any deficit, and financial assets representing the claims of the pension manager on the pension funds for any excess, e.g. where the investment income exceeds the increase in entitlements and the difference is payable to the pension manager.
Entitlements to non-pension benefits (AF.65)	The excess of net contributions over benefits as an increase in the liability of the insurance scheme towards the beneficiaries.
Provisions for calls under standardised guarantees (AF.66)	Financial assets that holders of standardised guarantees have against corporations providing standardised guarantees.

Classification of assets	Summary
Financial derivatives and employee stock options (AF.7)	Financial assets linked to a financial asset, a non-financial asset or an index, through which specific financial risks can be traded in financial markets in their own right.
Financial derivatives (AF.71)	Financial assets such as options, forwards and credit derivatives. Options (AF.711), both tradable and over-the-counter (OTC), are contracts which give the holder of the option the right, but not the obligation, to purchase from (a call option) or to sell to (a put option) the issuer of the option (the option writer) a financial asset or a non-financial asset (the underlying instrument) at a predetermined price (the strike price) within a given time span (American option) or on a given date (European option). Based on these basic strategies many combined strategies have been developed like bear call/put spreads, bull call/put spreads or butterfly options spreads. From these types of options exotic options have been derived with complex payment structures. Forwards (AF.712) are unconditional financial contracts under which two counterparties agree to exchange a specified quantity of an underlying asset (financial or non-financial) at an agreed contract price (the strike price) on a specified date. Credit derivatives take the form of forward-type and option-type contracts whose primary purpose is to trade credit risk. They are designed for trading in loan and security default risk. Like other financial derivatives they are frequently drawn up under standard master legal agreements and involve collateral and margining procedures, which allow for a means to make a market valuation. The transfer of credit risks takes place between the risk seller (security taker) and the risk buyer (security seller) based on a premium. In the event of a credit default the risk buyer pays cash to the risk seller.
Employee stock options (AF.72)	Financial assets in the form of agreements made on a given date (the 'grant' date) under which an employee may purchase a given number of shares of the employer's stock at a stated price (the 'strike' price) either at a stated time (the 'vesting' date) or within a period of time (the 'exercise' period) immediately following the vesting date.
Other accounts receivable/payable (AF.8)	Financial assets that are created as a counterpart of a financial or a non-financial transaction in cases where there is a timing difference between this transaction and the corresponding payment.
Trade credits and advances (AF.81)	Financial assets arising from the direct extension of credit by suppliers of goods and services to their customers and advances for work that is in progress or is yet to be undertaken and in the form of prepayment by customers for goods and services not yet provided.
Other accounts receivable/payable, excluding trade credits and advances (AF.89)	Financial assets which arise from timing differences between distributive transactions or financial transactions on the secondary market and the corresponding payment.
Memorandum items	The system has three memorandum items that show assets not separately identified in the central framework that are of more specialised analytic interest.
Consumer durables (AN.m)	Durable goods acquired by households for final consumption (i.e., items that are not used by households as stores of value or by unincorporated enterprises owned by households for purposes of production).
Foreign direct investment (AF.m1)	Foreign direct investment involves a long-term relationship reflecting a lasting interest by a resident institutional unit in one economy (the 'direct investor') in an institutional unit resident in another economy. The direct investor's purpose is to exert a significant degree of influence on the management of the unit they have invested in.
Non-performing loans (AF.m2)	A loan is non-performing when payments of interest or principal are at least 90 days overdue, or interest payments equal to 90 days or more have been capitalised, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons (such as a debtor filing for bankruptcy) to doubt that payments will be made in full.

Annex 7.2

A map of entries from opening balance sheet to closing balance sheet

Annex 7.2 presents a map from the opening balance sheet to the closing balance sheet, showing the detail for each asset category with regard to the different ways in which the balance sheet value changes: through transactions or other changes in the volume of assets and holding gains and losses.

Classification of assets, liabilities and net worth	IV.1 Opening balance sheet	III.1 and III.2 Transactions	III.3.1 Other changes in volume	III.3.2 Holding gains and losses		IV.3 Closing balance sheet
				III.3.2.1 Neutral holding gains and losses	III.3.2.2 Real holding gains and losses	
Non-financial assets	AN	P.5, NP	K.1, K.2, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN
Produced non-financial assets	AN.1	P.5	K.1, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.1
Fixed assets[1]	AN.11	P.51g, P.51c	K.1, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.11
Dwellings	AN.111	P.51g, P.51c	K.1, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.111
Other buildings and structures	AN.112	P.51g, P.51c	K.1, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.112
Machinery and equipment	AN.113	P.51g, P.51c	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.113
Weapons systems	AN.114	P.51g, P.51c	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.114
Cultivated biological resources	AN.115	P.51g, P.51c	K.1, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.115
Intellectual property products	AN.117	P.51g, P.51c	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.117
Inventories by type of inventory	AN.12	P.52	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.12
Valuables	AN.13	P.53	K.1, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.13
Non-produced non-financial assets	AN.2	NP	K.1, K.21, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.2
Natural resources	AN.21	NP.1	K.1, K.21, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.21
Land	AN.211	NP.1	K.1, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.211
Mineral and energy reserves	AN.212	NP.1	K.1, K.21, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.212

Classification of assets, liabilities and net worth	IV.1 Opening balance sheet	III.1 and III.2 Transactions	III.3.1 Other changes in volume	III.3.2 Holding gains and losses		IV.3 Closing balance sheet
				III.3.2.1 Neutral holding gains and losses	III.3.2.2 Real holding gains and losses	
Non-cultivated biological resources	AN.213	NP.1	K.1, K.21, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.213
Water resources	AN.214	NP.1	K.1, K.21, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.214
Other natural resources	AN.215	NP.1	K.1, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.215
Radio spectra	AN.2151	NP.1	K.1, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.2151
Other	AN.2159	NP.1	K.1, K.21, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.2159
Contracts, leases and licences	AN.22	NP.2	K.1, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.22
Purchases less sales of goodwill and marketing assets	AN.23	NP.3	K.1, K.22, K.3, K.4, K.5, K.61, K.62	K.71	K.72	AN.23
Financial assets/liabilities[2]	AF	F	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF
Monetary gold and SDRs	AF.1	F.1	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.1
Currency and deposits	AF.2	F.2	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.2
Debt securities	AF.3	F.3	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.3
Loans	AF.4	F.4	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.4
Equity and investment fund shares/units	AF.5	F.5	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.5
Insurance, pension and standardised guarantees schemes	AF.6	F.6	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.6
Financial derivatives and employee stock options	AF.7	F.7	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.7
Other accounts receivable/ payable	AF.8	F.8	K.3, K.4, K.5, K.61, K.62	K.71	K.72	AF.8
Net worth	B.90	B.101	B.102	B.1031	B.1032	B.90

[1] Memorandum item: AN.m: consumer durables.

[2] Memorandum items: AF.m1: foreign direct investment; AF.m2: non-performing loans.

Balancing items	
B.10	Changes in net worth
B.101	Changes in net worth due to saving and capital transfers
B.102	Changes in net worth due to other changes in volume of assets
B.103	Changes in net worth due to nominal holding gains and losses
B.1031	Changes in net worth due to neutral holding gains and losses
B.1032	Changes in net worth due to real holding gains and losses
B.90	Net worth
Transactions in financial assets and liabilities	
F	Transactions in financial assets and liabilities
F.1	Monetary gold and SDRs
F.2	Currency and deposits
F.3	Debt securities
F.4	Loans
F.5	Equity and investment fund shares/units
F.6	Insurance, pension and standardised guarantees
F.7	Financial derivatives and employee stock options
F.8	Other accounts receivable/payable
Transactions in goods and services	
P.5	Gross capital formation
P.51g	Gross fixed capital formation
P.51c	Consumption of fixed capital (–)
P.511	Acquisitions less disposals of fixed assets
P.5111	Acquisitions of new fixed assets
P.5112	Acquisitions of existing fixed assets
P.5113	Disposals of existing fixed assets
P.512	Costs of ownership transfer on non-produced assets
P.52	Changes in inventories
P.53	Acquisitions less disposals of valuables

Other accumulation entries	
NP	Acquisitions less disposals of non-produced assets
NP.1	Acquisitions less disposals of natural resources
NP.2	Acquisitions less disposals of contracts, leases and licences
NP.3	Purchases less sales of goodwill and marketing assets
K.1	Economic appearance of assets
K.2	Economic disappearance of non-produced assets
K.21	Depletion of natural resources
K.22	Other economic disappearance of non-produced assets
K.3	Catastrophic losses
K.4	Uncompensated seizures
K.5	Other changes in volume n.e.c.
K.6	Changes in classification
K.61	Changes in sector classification and structure
K.62	Changes in classification of assets and liabilities
K.7	Nominal holding gains and losses
K.71	Neutral holding gains and losses
K.72	Real holding gains and losses

CHAPTER 8

The sequence of accounts

Introduction

8.01 This Chapter sets out the details of the accounts and balance sheets in the sequence of accounts of the national accounts. It also sets out the interactions of the domestic economy with the rest of the world in the same sequence. The goods and services account is also described, reflecting the accounting identity underlying the supply and use of goods and services. Finally it presents the integrated set of economic accounts where each sector is shown in the same account with an aggregated form of account entries.

The sequence of accounts

8.02 The ESA records flows and stocks in an ordered set of accounts describing the economic cycle from production and the generation of income, through its distribution and redistribution, and its use for final consumption. Finally the ESA records the use of what is left in the form of saving to provide for the accumulation of assets, both non-financial and financial.

8.03 Each of the accounts shows resources and uses, which are brought to a balance by the introduction of a balancing item, usually on the uses' side of the account. The balancing item is taken forward to the next account as the first entry on the resources side.

The structured recording of transactions according to a logical analysis of economic life provides the aggregates required for the study of an institutional sector or subsector, or the total economy. The breakdown of the accounts is designed to reveal the most significant economic information, and the balancing item of each account is a key element in the information revealed.

8.04 The accounts are grouped in three categories:

(a) current accounts cover production and the associated generation, distribution and redistribution of income and its use in the form of final consumption. The income not directly used for final consumption is revealed in the balancing item saving, which is taken forward to the accumulation accounts as the first entry on the resources side of the capital account;

(b) accumulation accounts analyse changes in the assets and liabilities of the units and enable changes in net worth (the difference between assets and liabilities) to be recorded;

(c) balance sheets show the total assets and liabilities at the beginning and the end of the accounting period, together with the net worth. The flows for each asset and liability item recorded in the accumulation accounts are seen again in the changes in balance sheets account.

8.05 The sequence of accounts applies to institutional units, institutional sectors and subsectors, and the total economy.

8.06 The balancing items are established both gross and net. They are gross if calculated before deduction of consumption of fixed capital, and net if calculated after this deduction. It is more significant to express income balancing items in net terms, as consumption of capital is a call on disposable income which must be met if the capital stock of the economy is to be maintained.

8.07 The accounts are presented in two ways:

(a) in the form of integrated economic accounts, showing the accounts for all the institutional sectors, the total economy and the rest of the world in a single table;

(b) in the form of a sequence of accounts, giving more detailed information. The tables showing the presentation of each account are given in the section of this Chapter entitled 'Sequence of accounts'.

8.08 Table 8.1 shows a synoptic presentation of the accounts, balancing items and main aggregates: The code for the main aggregates is not shown in the table, but is the same as the code for the balancing items, but with the addition of an asterisk after the number. For example for the Balance of primary incomes, the code is B.5g and the equivalent code of the main aggregate gross national income is B.5*g.

8.09 The balancing items are shown in the table in their gross form, and indicated as such by the use of 'g' in the code. For each such code there is a net form, where the estimate for capital consumption has been deducted. For example, value added, gross has a code of B.1g, and the net equivalent (value added, net) where capital consumption has been deducted, is B.1n.

Table 8.1 — Synoptic presentation of the accounts, balancing items and main aggregates

Accounts									Balancing items	Main aggregates
Full sequence of accounts for institutional sectors										
Current accounts	I.	Production account	I.	Production account				B.1g	Value added, gross	Gross domestic product (GDP)
	II.	Distribution and use of income accounts	II.1	Primary distribution of income accounts	II.1.1	Generation of income account		B.2g B.3g	Operating surplus, gross Mixed income, gross	
					II.1.2	Allocation of primary income account	II.1.2.1 Entrepreneurial income account	B.4g	Entrepreneurial income, gross	
							II.1.2.2 Allocation of other primary income account	B.5g	Balance of primary incomes, gross	Gross national income (GNI)
			II.2	Secondary distribution of income account				B.6g	Disposable income, gross	Gross national disposable income
			II.3	Redistribution of income in kind account				B.7g	Adjusted disposable income, gross	
			II.4	Use of income account	II.4.1	Use of disposable income account		B.8g	Saving, gross	Gross national saving
					II.4.2	Use of adjusted disposable income account				
Accumu-lation accounts	III.	Accumulation accounts	III.1	Capital account	III.1.1	Change in net worth due to saving and capital transfers account		B.101	Change in net worth due to saving and capital transfers	
					III.1.2	Acquisition of non-financial assets account		B.9	Net lending/net borrowing	
			III.2	Financial account				B.9	Net lending/net borrowing	
			III.3	Other changes in assets account	III.3.1	Other changes in volume of assets account		B.102	Changes in net worth, due to other changes in volume of assets	

Accounts										Balancing items	Main aggregates
					III.3.2	Revaluation accounts			B.103	Changes in net worth due to nominal holding gains/losses	
							III.3.2.1	Neutral holding gains/losses account	B.1031	Changes in net worth due to neutral holding gains/losses	
							III.3.2.2	Real holding gains/losses account	B.1032	Changes in net worth due to real holding gains/losses	
Balance sheets	IV.	Balance sheets	IV.1	Opening balance sheet					B.90	Net worth	National worth
			IV.2	Changes in balance sheet					B.10	Changes in net worth, total	Changes in national worth
			IV.3	Closing balance sheet					B.90	Net worth	National worth

Table 8.1 — Synoptic presentation of the accounts, balancing items and main aggregates (continued)

Accounts										Balancing items	Main aggregates
Transaction accounts											
	0.	Goods and services account									
Rest of the world account (external transactions account)											
Current account	V.	Rest of the world account	V.I	External account of goods and services					B.11	External balance of goods and services	External balance of goods and services
			V.II	External account of primary income and current transfers					B.12	Current external balance	Current external balance
Accumulation accounts			V.III	External accumulation accounts	V.III.1	Capital account	V.III.1.1	Changes in net worth due to current external balance and capital transfers account	B.101	Changes in net worth due to current external balance and capital transfers	
							V.III.1.2	Acquisition of non-financial assets account	B.9	Net lending/net borrowing	

Accounts								Balancing items	Main aggregates
			V.III.2	Financial account			B.9	Net lending/net borrowing	Net lending/net borrowing
			V.III.3	Other changes in assets account	V.III.3.1	Other changes in volume of assets account	B.102	Changes in net worth, due to other changes in volume of assets	
					V.III.3.2	Revaluation accounts	B.103	Changes in net worth, due to nominal holding gains/losses	
Balance sheets	V.IV	External assets and liabilities account	V.IV.1	Opening balance sheet			B.90	Net worth	Net external financial position
			V.IV.2	Changes in balance sheet			B.10	Changes in net worth	
			V.IV.3	Closing balance sheet			B.90	Net worth	Net external financial position

Sequence of accounts

Current accounts

Production account (I)

8.10 The production account (I) shows the transactions relating to the production process. It is drawn up for institutional sectors and for industries. Its resources include output and its uses include intermediate consumption.

8.11 The production account reveals one of the most important balancing items in the system — value added, or the value generated by any unit engaged in a production activity — and a vital aggregate: gross domestic product. Value added is economically significant for both institutional sectors and industries.

8.12 Value added (the balancing item of the account) may be calculated before or after allowing for the consumption of fixed capital, i.e. gross or net. Given that output is valued at basic prices and intermediate consumption at purchasers' prices, value added does not include taxes less subsidies on products.

8.13 The production account at the level of the total economy includes in resources, in addition to the output of goods and services, taxes less subsidies on products. It thus enables gross domestic product (at market prices) to be obtained as a balancing item. The code for this key aggregate balancing item, value added at whole economy level adjusted to be at market prices, is B.1*g and this is GDP at market prices. Net domestic product (NDP) code is B.1*n.

8.14 Financial intermediation services indirectly measured (FISIM) are allocated to users as costs. This requires part of interest payments to financial intermediaries to be reclassified as payments for services, and allocated as output of the financial intermediation producers. An equivalent value is identified as consumption of users. The value of GDP is affected by the amount of FISIM allocated to final consumption, exports and imports.

Table 8.2 — Account I: production account

Uses

	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
3 604	3 604								P.1	Output
3 077	3 077								P.11	Market output
147	147								P.12	Output for own final use
380	380								P.13	Non-market output
1 883			1 883	17	115	222	52	1 477	P.2	Intermediate consumption
133	133								D.21-D.31	Taxes less subsidies on products
1 854			1 854	15	155	126	94	1 331	B.1g/B.1*g	Value added, gross/gross domestic product
222			222	3	23	27	12	157	P.51c	Consumption of fixed capital
1 632			1 632	12	132	99	82	1 174	B.1n/B.1*n	Value added, net/net domestic product

Resources

		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
P.1	Output	2 808	146	348	270	32	3 604			3 604
P.11	Market output	2 808	146	0	123	0	3 077			3 077
P.12	Output for own final use	0	0	0	147	0	147			147
P.13	Non-market output			348		32	380			380
P.2	Intermediate consumption								1 883	1 883
D.21-D.31	Taxes less subsidies on products						133			133
B.1g/B.1*g	Value added, gross/gross domestic product									
P.51c	Consumption of fixed capital									
B.1n/B.1*n	Value added, net/net domestic product									

Distribution and use of income accounts (II)

8.15 Distribution and use of income are analysed in four stages: primary distribution, secondary distribution, redistribution in kind and use of income.

The first stage concerns the generation of income resulting directly from the production process and its distribution between the production factors (labour, capital) and general government (via taxes on production and imports, and subsidies). It enables the operating surplus (or mixed income in the case of households) and primary income to be determined.

The second stage traces redistribution of income via transfers, other than social transfers in kind and capital transfers. This yields the disposable income as the balancing item.

For the third stage, individual services provided by government and NPISHs to society are treated as part of household final consumption, and a corresponding income imputed to households. This is achieved through two accounts with adjusted items. An account is introduced called the redistribution of income in kind account, which shows in the resources the imputed extra income for households, and a corresponding use for government and NPISHs as the imputed transfer from these sectors. This gives a balancing item called the adjusted disposable income, which is identical to disposal income at the whole economy level, but different for the sectors of households, government and NPISHs.

In the fourth stage, the disposable income is taken forward to the next account, the use of disposable income account and this shows how the income is consumed, leaving saving as the balancing item. When individual services are recognised as consumption by households through the redistribution of income in kind account, the use of adjusted disposable income account shows how this measure of adjusted disposable income is spent by households on the social transfers in kind received from government and NPISHs, by adding the value of the social transfers in kind to household final consumption to give a measure called actual final consumption. The consumption for government and NPISHs is reduced by an equal and opposite amount, so that when saving is calculated for the government, NPISHs and households sectors, the adjusted treatment gives the same balancing item of saving for each sector as the standard treatment.

Primary distribution of income accounts (II.1)

Generation of income account (II.1.1)

The layout of the generation of income account by institutional sector is shown in Table 8.3.

8.16 The generation of income account is also presented by industries, in the columns of the supply and use tables.

8.17 The generation of income account presents the transactions of primary income from the point of view of the source sectors, rather than the destination sectors.

8.18 It shows how value added covers compensation of employees and other taxes (less subsidies) on production. The balancing item is operating surplus, which is the surplus (or deficit) on production activities before account has been taken of the interest, rents or charges which the production unit:

(a) must pay on financial assets or on natural resources — which it has borrowed or rented;

(b) must receive on financial assets or on natural resources of which it is the owner.

8.19 In the case of unincorporated enterprises in the households sector, the balancing item of the generation of income account implicitly contains an element corresponding to remuneration for work carried out by the owner or members of the family. This income from self-employment has characteristics of wages and salaries, and characteristics of profit due to work carried out as an entrepreneur. This income, neither strictly wages nor profits alone, is referred to as 'mixed income'.

8.20 In the case of own account production of housing services by owner-occupier households, the balancing item of the generation of income account is operating surplus (and not mixed income).

Table 8.3 — Account II.1.1: generation of income account

Uses										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.1g/B.1*g	Value added, gross/gross domestic product
									B.1n/B.1*n	Value added, net/net domestic product
1 150			1 150	11	11	98	44	986	D.1	Compensation of employees
950			950	6	11	63	29	841	D.11	Wages and salaries
200			200	5	0	55	5	145	D.12	Employers' social contributions
181			181	4	0	51	4	132	D.121	Employers' actual social contributions
168			168	4	0	48	4	122	D.1211	Employers' actual pension contributions
13			13	0	0	3	0	10	D.1212	Employers' actual non-pension contributions
19			19	1	0	4	1	13	D.122	Employers' imputed social contributions
18			18	1	0	4	1	12	D.1221	Employers' imputed pension contributions
1			1	0	0	0	0	1	D.1222	Employers' imputed non-pension contributions
235		0	235						D.2	Taxes on production and imports
141		0	141						D.21	Taxes on products
121		0	121						D.211	Value added type taxes (VAT)
17		0	17						D.212	Taxes and duties on imports excluding VAT
17		0	17						D.2121	Import duties
0		0	0						D.2122	Taxes on imports excluding VAT and duties
3		0	3						D.214	Taxes on products except VAT and import taxes
94		0	94	1	0	1	4	88	D.29	Other taxes on production
−44		0	−44						D.3	Subsidies
−8		0	−8						D.31	Subsidies on products

Uses										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations	Transactions and balancing items	
0		0	0						D.311	Import subsidies
−8		0	−8						D.319	Other subsidies on products
−36		0	−36	0	−1	0	0	−35	D.39	Other subsidies on production
452			452	3	84	27	46	292	B.2g	Operating surplus, gross
61			61		61				B.3g	Mixed income, gross
214			214	3	15	27	12	157	P.51c1	Consumption of fixed capital on gross operating surplus
8			8		8				P.51c2	Consumption of fixed capital on gross mixed income
238			238	0	69	0	34	135	B.2n	Operating surplus, net
53			53		53				B.3n	Mixed income, net

Table 8.3 — Account II.1.1: generation of income account (continued)

Resources										
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
Transactions and balancing items		Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.1g/B.1*g	Value added, gross/gross domestic product	1 331	94	126	155	15	1 854			1 854
B.1n/B.1*n	Value added, net/net domestic product	1 174	82	99	132	12	1 632			1 632
D.1	Compensation of employees									
D.11	Wages and salaries									
D.12	Employers' social contributions									
D.121	Employers' actual social contributions									
D.1211	Employers' actual pension contributions									

		Resources								
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
D.1212	Employers' actual non-pension contributions									
D.122	Employers' imputed social contributions									
D.1221	Employers' imputed pension contributions									
D.1222	Employers' imputed non-pension contributions									
D.2	Taxes on production and imports								0	
D.21	Taxes on products								0	
D.211	Value added type taxes (VAT)								0	
D.212	Taxes and duties on imports excluding VAT								0	
D.2121	Import duties								0	
D.2122	Taxes on imports excluding VAT and duties								0	
D.214	Taxes on products except VAT and import taxes								0	
D.29	Other taxes on production								0	
D.3	Subsidies								0	
D.31	Subsidies on products								0	
D.311	Import subsidies								0	
D.319	Other subsidies on products								0	
D.39	Other subsidies on production								0	
B.2g	Operating surplus, gross									
B.3g	Mixed income, gross									
B.2n	Operating surplus, net									
B.3n	Mixed income, net									

Allocation of primary income account (II.1.2)

8.21 Unlike the generation of income account, the allocation of primary income treats resident units and institutional sectors as recipients rather than producers of primary income.

8.22'Primary income' is the income which resident units receive by virtue of their direct participation in the production process, and the income receivable by the owner of a financial asset or a natural resource in return for providing funds to, or putting the natural resource at the disposal of, another institutional unit.

8.23 For the households sector, compensation of employees (D.1) as a resource in the allocation of primary income account is not the same as the D.1 entry as a use, in the generation of income account. In the household generation of income account, the use entry shows how much is paid to staff employed in the household business. In the households sector allocation of primary income account, the entry in the resources side shows all the compensation from employment earned by the households sector working as an employee in business, the government etc. So the entry in the allocation account for households is much bigger than the entry in the households sector generation account.

8.24 The allocation of primary income account (II.1.2) can be calculated only for the institutional sectors and subsectors because, in the case of industries, it is impossible to break down certain flows connected with financing (capital loans and borrowings) and assets.

8.25 The allocation of primary income account is broken down into an entrepreneurial income account (II.1.2.1) and an allocation of other primary income account (II.1.2.2).

Table 8.4 — Account II.1.2: allocation of primary income account

Uses										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.2g	Operating surplus, gross
									B.3g	Mixed income, gross
									B.2n	Operating surplus, net
									B.3n	Mixed income, net
6		6							D.1	Compensation of employees
6		6							D.11	Wages and salaries
0		0							D.12	Employers' social contributions
0		0							D.121	Employers' actual social contributions
0		0							D.1211	Employers' actual pension contributions
0		0							D.1212	Employers' actual non-pension contributions
0		0							D.122	Employers' imputed social contributions
0		0							D.1221	Employers' imputed pension contributions
0		0							D.1222	Employers' imputed non-pension contributions
0									D.2	Taxes on production and imports
0									D.21	Taxes on products
0									D.211	Value added type taxes (VAT)
0									D.212	Taxes and duties on imports excluding VAT
0									D.2121	Import duties
0									D.2122	Taxes on imports excluding VAT and duties
0									D.214	Taxes on products except VAT and import taxes
0									D.29	Other taxes on production

Uses										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
0									D.3	Subsidies
0									D.31	Subsidies on products
0									D.311	Import subsidies
0									D.319	Other subsidies on products
0									D.39	Other subsidies on production
435		44	391	6	41	42	168	134	D.4	Property income
230		13	217	6	14	35	106	56	D.41	Interest
79		17	62	0			15	47	D.42	Distributed income of corporations
67		13	54				15	39	D.421	Dividends
12		4	8				0	8	D.422	Withdrawals from income of quasi-corporations
14		14	0				0	0	D.43	Reinvested earnings on foreign direct investment
47		0	47				47		D.44	Other investment income
25		0	25				25		D.441	Investment income attributable to insurance policy holders
8		0	8				8		D.442	Investment income payable on pension entitlements
14		0	14				14		D.443	Investment income attributable to collective investment fund shareholders
6		0	6				6		D.4431	Dividends attributable to collective investment fund shareholders
8		0	8				8		D.4432	Retained earnings attributable to collective investment fund shareholders
653			65	0	27	7	0	31	D.45	Rent
1 864			1 864	4	1 381	198	27	254	B.5g/B.5*g	Balance of primary incomes, gross/ national income, gross
1 642			1 642	1	1 358	171	15	97	B.5n/B.5*n	Balance of primary incomes, net/national income, net

Table 8.4 — Account II.1.2: allocation of primary income (continued)

	Resources									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.2g	Operating surplus, gross	292	46	27	84	3	452			452
B.3g	Mixed income, gross				61		61			61
B.2n	Operating surplus, net	135	34	0	69	0	238			238
B.3n	Mixed income, net				53		53			53
D.1	Compensation of employees				1 154		1 154	2		1 156
D.11	Wages and salaries				954		954	2		956
D.12	Employers' social contributions				200		200	0		200
D.121	Employers' actual social contributions				181		181	0		181
D.1211	Employers' actual pension contributions				168		168	0		168
D.1212	Employers' actual non-pension contributions				13		13	0		13
D.122	Employers' imputed social contributions				19		19	0		19
D.1221	Employers' imputed pension contributions				18		18	0		18
D.1222	Employers' imputed non-pension contributions				1		1	0		1
D.2	Taxes on production and imports			235			235			235
D.21	Taxes on products			141			141			141
D.211	Value added type taxes (VAT)			121			121			121
D.212	Taxes and duties on imports excluding VAT			17			17			17
D.2121	Import duties			17			17			17
D.2122	Taxes on imports excluding VAT and duties			0			0			0
D.214	Taxes on products except VAT and import taxes			3			3			3
D.29	Other taxes on production			94			94			94

		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Resources									
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
D.3	Subsidies			–44			–44			–44
D.31	Subsidies on products			–8			–8			–8
D.311	Import subsidies			0			0			0
D.319	Other subsidies on products			–8			–8			–8
D.39	Other subsidies on production			–36			–36			–36
D.4	Property income	96	149	22	123	7	397	38		435
D.41	Interest	33	106	14	49	7	209	21		230
D.42	Distributed income of corporations	10	25	7	20	0	62	17		79
D.421	Dividends	10	25	5	13	0	53	14		67
D.422	Withdrawals from income of quasi-corporations			2	7		9	3		12
D.43	Reinvested earnings on foreign direct investment	4	7	0	3	0	14	0		14
D.44	Other investment income	8	8	1	30	0	47	0		47
D.441	Investment income attributable to insurance policy holders	5	0	0	20	0	25	0		25
D.442	Investment income payable on pension entitlements				8		8	0		8
D.443	Investment income attributable to collective investment fund shareholders	3	8	1	2	0	14	0		14
D.4431	Dividends attributable to collective investment fund shareholders	1	3	0	2	0	6	0		6
D.4432	Retained earnings attributable to collective investment fund shareholders	2	5	1	0	0	8	0		8
D.45	Rent	41	3	0	21	0	65			65
B.5g/B.5*g	Balance of primary incomes, gross/ national income, gross									
B.5n/B.5*n	Balance of primary incomes, net/national income, net									

Entrepreneurial income account (II.1.2.1)

8.26 The purpose of the entrepreneurial income account is to determine a balancing item corresponding to the concept of current profit before distribution and income tax, as normally used in business accounting.

8.27 In the case of general government and non-profit institutions serving households, this account concerns only their market activities.

8.28 Entrepreneurial income corresponds to the operating surplus or mixed income (on the resources side):

plus property income receivable in connection with financial and other assets belonging to the enterprise (on the resources side),

minus interest on debts payable by the enterprise, other investment income payable, and rents payable on land and other *natural* resources rented by the enterprise (on the uses side).

Property income payable in the form of dividends, withdrawals of income from quasi-corporations, or reinvested earnings on foreign direct investment, is not deducted from entrepreneurial income.

Allocation of other primary income account (II.1.2.2)

8.29 The purpose of the allocation of other primary income account is to return from the concept of entrepreneurial income to the concept of primary income. It therefore contains the elements of primary income not included in the entrepreneurial income account:

(a) in the case of corporations, distributed dividends, withdrawals of income from quasi-corporations, and reinvested earnings on foreign direct investment (on the uses side);

(b) in the case of households:

(1) property income payable, excluding rents and interest payable in connection with the entrepreneurial activity (on the uses side);

(2) compensation of employees (on the resources side);

(3) property income receivable, excluding that receivable in connection with the activity of the enterprise (on the resources side);

(c) in the case of general government:

(1) property income payable, excluding that payable in connection with market activities (on the uses side);

(2) taxes on production and imports less subsidies (on the resources side);

(3) property income receivable, excluding that receivable in connection with market activities (on the resources side).

Table 8.5 — Account II.1.2.1: entrepreneurial income

Uses											
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.2g	Operating surplus, gross
									B.3g	Mixed income, gross
									B.2n	Operating surplus, net
									B.3n	Mixed income, net
240			240				153	87	D.4	Property income
162			162				106	56	D.41	Interest
									D.42	Distributed income of corporations
									D.421	Dividends
									D.422	Withdrawals from income of quasi-corporations
									D.43	Reinvested earnings on foreign direct investment
47			47				47		D.44	Other investment income
25			25				25		D.441	Investment income attributable to insurance policy holders
8			8				8		D.442	Investment income payable on pension entitlements
14			14				14		D.443	Investment income attributable to collective investment fund shareholders
31			31				0	31	D.45	Rent
343			343				42	301	B.4g	Entrepreneurial income, gross
174			174				30	144	B.4n	Entrepreneurial income, net

Table 8.5 — Account II.1.2.1: entrepreneurial income (continued)

		Resources								
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.2g	Operating surplus, gross	292	46	27	84	3	452			452
B.3g	Mixed income, gross				61		61			61
B.2n	Operating surplus, net	135	34	0	69	0	238			238
B.3n	Mixed income, net				53		53			53
D.4	Property income	96	149				245			245
D.41	Interest	33	106				139			139
D.42	Distributed income of corporations	10	25				35			35
D.421	Dividends	10	25				35			35
D.422	Withdrawals from income of quasi-corporations						0			0
D.43	Reinvested earnings on foreign direct investment	4	7				11			11
D.44	Other investment income	8	8				16			16
D.441	Investment income attributable to insurance policy holders	5					5			5
D.442	Investment income payable on pension entitlements						0			0
D.443	Investment income attributable to collective investment fund shareholders	3	8				11			11
D.45	Rent	41	3				44			44
B.4g	Entrepreneurial income. gross									
B.4n	Entrepreneurial income, net									

Table 8.5 — Account II.1.2.2: allocation of other primary income

Uses										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.4g	Entrepreneurial income, gross
									B.4n	Entrepreneurial income, net
6		6							D.1	Compensation of employees
6		6							D.11	Wages and salaries
									D.12	Employers' social contributions
									D.121	Employers' actual social contributions
									D.122	Employers' imputed social contributions
									D.2	Taxes on production and imports
									D.21	Taxes on products
									D.211	Value added type taxes (VAT)
									D.212	Taxes and duties on imports excluding VAT
									D.2121	Import duties
									D.2122	Taxes on imports excluding VAT and duties
									D.214	Taxes on products except VAT and import taxes
									D.29	Other taxes on production
									D.3	Subsidies
									D.31	Subsidies on products
									D.311	Import subsidies
									D.319	Other subsidies on products
									D.39	Other subsidies on production
214		63	151	6	41	42	15	47	D.4	Property income
68		13	55	6	14	35			D.41	Interest
98		36	62				15	47	D.42	Distributed income of corporations

Uses										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
54		0	54				15	39	D.421	Dividends
44		36	8					8	D.422	Withdrawals from income of quasi-corporations
14		14	0						D.43	Reinvested earnings on foreign direct investment
									D.44	Other investment income
									D.441	Investment income attributable to insurance policy holders
									D.442	Investment income payable on pension entitlements
									D.443	Investment income attributable to collective investment fund shareholders
34			34	0	27	7			D.45	Rent
1 864			1 864	4	1 381	198	27	254	B.5g/B.5*g	Balance of primary incomes, gross/ national income, gross
1 642			1 642	1	1 358	171	15	97	B.5n/B.5*n	Balance of primary incomes, net/national income, net

Table 8.5 — Account II.1.2.2: allocation of other primary income (continued)

Resources										
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.4g	Entrepreneurial income. Gross	301	42				343			343
B.4n	Entrepreneurial income, net	144	30				174			174
D.1	Compensation of employees				1 154		1 154	2		1 156
D.11	Wages and salaries				954		954	2		956

	Resources									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
D.12	Employers' social contributions				200		200			200
D.121	Employers' actual social contributions				181		181			181
D.122	Employers' imputed social contributions				19		19			19
D.2	Taxes on production and imports			235			235			235
D.21	Taxes on products			141			141			141
D.211	Value added type taxes (VAT)			121			121			121
D.212	Taxes and duties on imports excluding VAT			17			17			17
D.2121	Import duties			17			17			17
D.2122	Taxes on imports excluding VAT and duties			0			0			0
D.214	Taxes on products except VAT and import taxes			3			3			3
D.29	Other taxes on production			94			94			94
D.3	Subsidies			–44			–44			–44
D.31	Subsidies on products			–8			–8			–8
D.311	Import subsidies			0			0			0
D.319	Other subsidies on products			–8			–8			–8
D.39	Other subsidies on production			–36			–36			–36
D.4	Property income			22	123	7	152	38		190
D.41	Interest			14	49	7	70	21		91
D.42	Distributed income of corporations			7	20	0	27	17		44
D.421	Dividends			5	13	0	18	14		32
D.422	Withdrawals from income of quasi-corporations			2	7	0	9	3		12
D.43	Reinvested earnings on foreign direct investment			0	3	0	3	0		3

	Resources									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
D.44	Other investment income			1	30	0	31	0		31
D.441	Investment income attributable to insurance policy holders			0	20	0	20	0		20
D.442	Investment income payable on pension entitlements			0	8	0	8	0		8
D.443	Investment income attributable to collective investment fund shareholders			1	2	0	3	0		3
D.45	Rent			0	21	0	21			21
B.5g/B.5*g	Balance of primary incomes, gross/ national income, gross									
B.5n/B.5*n	Balance of primary incomes, net/national income, net									

Secondary distribution of income account (II.2)

8.30 The secondary distribution of income account shows how the balance of the primary income of an institutional sector is allocated by redistribution: current taxes on income, wealth etc., social contributions and benefits (excluding social transfers in kind) and other current transfers.

8.31 The balancing item of the account is disposable income, which reflects current transactions and is the amount available for final consumption or saving.

8.32 Social contributions are recorded on the uses side of the secondary distribution of income account of households and on the resources side of the secondary distribution of income account of the institutional sectors responsible for management of social insurance. When payable by employers for their employees, they are first included under compensation of employees, on the uses side of the employers' generation of income account, since they form part of wage costs; they are also recorded, as compensation of employees, on the resources side of the households' allocation of primary income account, since they correspond to benefits to households.

The social contributions shown on the uses side of the secondary distribution of income account of households are net of the service charges of the pension funds and other insurance companies, all or part of whose resources are made up of actual social contributions.

An adjustment item is shown in the table for the social insurance scheme service charges. Net social contributions (D.61) are recorded net of these charges, but, as it is difficult to apportion them across the components of D.61, those contributions are shown gross of these charges in the table. So D.61 is the sum of its components, less this adjustment item.

Redistribution of income in kind account (II.3)

8.33 The redistribution of income in kind account gives a broader picture of households' income by including the flows corresponding to the use of individual goods and services which these households receive free of charge from government and NPISHs, i.e. social transfers in kind. This facilitates comparisons over time when there are differences or changes in economic and social conditions, and supplements the analysis of the role of general government in the redistribution of income.

8.34 Social transfers in kind are recorded on the resources side of the redistribution of income in kind account in the case of households, and on the uses side in the case of general government and non-profit institutions serving households.

8.35 The balancing item in the redistribution of income in kind account is adjusted disposable income, and this is the first entry on the resources side of the use of adjusted disposable income account (II.4.2).

Table 8.6 — Account II.2: Secondary distribution of income account

Uses										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.5g/B.5*g	Balance of primary incomes, gross/ National income, gross
									B.5n/B.5*n	Balance of primary incomes, net/National income, net
1 229		17	1 212	7	582	248	277	98		Current transfers
213		1	212	0	178	0	10	24	D.5	Current taxes on income, wealth, etc.
204		1	203	0	176	0	7	20	D.51	Taxes on income
9			9	0	2	0	3	4	D.59	Other current taxes
333		0	333		333				D.61	Net social contributions
181		0	181		181				D.611	Employers' actual social contributions
168		0	168		168				D.6111	Employers' actual pension contributions
13		0	13		13				D.6112	Employers' actual non-pension contributions
19		0	19		19				D.612	Employers' imputed social contributions
18		0	18		18				D.6121	Employers' imputed pension contributions
1		0	1		1				D.6122	Employers' imputed non-pension contributions
129		0	129		129				D.613	Households' actual social contributions
115		0	115		115				D.6131	Households' actual pension contributions
14		0	14		14				D.6132	Households' actual non-pension contributions
10		0	10		10				D.614	Households' social contribution supplements
8		0	8		8				D.6141	Households' pension contribution supplements
2		0	2		2				D.6142	Households' non-pension contribution supplements
−6		0	−6		−6				D.61SC	Social insurance scheme service charges

Uses										
Corresponding entries of the			S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
384		0	384	5	0	112	205	62	D.62	Social benefits other than social transfers in kind
53		0	53			53			D.621	Social security benefits in cash
45		0	45			45			D.6211	Social security pension benefits in cash
8		0	8			8			D.6212	Social security non-pension benefits in cash
279		0	279	5	0	7	205	62	D.622	Other social insurance benefits
250		0	250	3	0	5	193	49	D.6221	Other social insurance pension benefits
29		0	29	2	0	2	12	13	D.6222	Other social insurance non-pension benefits
52			52			52			D.623	Social assistance benefits in cash
299		16	283	2	71	136	62	12	D.7	Other current transfers
58		2	56	0	31	4	13	8	D.71	Net non-life insurance premiums
44		1	43	0	31	4	0	8	D.711	Net non-life direct insurance premiums
14		1	13				13		D.712	Net non-life reinsurance premiums
60		12	48				48		D.72	Non-life insurance claims
45		0	45				45		D.721	Non-life direct insurance claims
15		12	3				3		D.722	Non-life reinsurance claims
96		0	96			96			D.73	Current transfers within general government
23		1	22			22			D.74	Current international cooperation
53		1	52	2	40	5	1	4	D.75	Miscellaneous current transfers
36		0	36	0	29	5	1	1	D.751	Current transfers to NPISHs
8		1	7		7				D.752	Current transfers between households
9		0	9	2	4	0	0	3	D.759	Other miscellaneous current transfers
9			9			9			D.76	VAT- and GNI-based EU own resources
1 826			1 826	37	1 219	317	25	228	B.6g	Disposable income, gross
1 604			1 604	34	1 196	290	13	71	B.6n	Disposable income, net

Table 8.6 — Account II.2: secondary distribution of income account (continued)

		Resources								
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.5g/B.5*g	Balance of primary incomes, gross/ national income, gross	254	27	198	1 381	4	1 864			1 864
B.5n/B.5*n	Balance of primary incomes, net/national income, net	97	15	171	1 358	1	1 642			1 642
	Current transfers	72	275	367	420	40	1 174	55		1 229
D.5	Current taxes on income, wealth, etc.			213			213	0		213
D.51	Taxes on income			204			204	0		204
D.59	Other current taxes			9			9			9
D.61	Net social contributions	66	212	50	0	5	333	0		333
D.611	Employers' actual social contributions	31	109	38	0	3	181	0		181
D.6111	Employers' actual pension contributions	27	104	35	0	2	168	0		168
D.6112	Employers' actual non-pension contributions	4	5	3	0	1	13	0		13
D.612	Employers' imputed social contributions	12	2	4	0	1	19	0		19
D.6121	Employers' imputed pension contributions	12	1	4	0	1	18	0		18
D.6122	Employers' imputed non-pension contributions	0	1	0	0	0	1	0		1
D.613	Households' actual social contributions	25	94	9	0	1	129	0		129
D.6131	Households' actual pension contributions	19	90	6	0	0	115	0		115
D.6132	Households' actual non-pension contributions	6	4	3	0	1	14	0		14
D.614	Households' social contribution supplements		10				10	0		10
D.6141	Households' pension contribution supplements		8				8	0		8
D.6142	Households' non-pension contribution supplements		2				2	0		2
D.61SC	Social insurance scheme service charges	2	3		1		6	0		6

	Resources									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
D.62	Social benefits other than social transfers in kind				384		384	0		384
D.621	Social security benefits in cash				53		53	0		53
D.6211	Social security pension benefits in cash				45		45	0		45
D.6212	Social security non-pension benefits in cash				8		8	0		8
D.622	Other social insurance benefits				279		279	0		279
D.6221	Other social insurance pension benefits				250		250	0		250
D.6222	Other social insurance non-pension benefits				29		29	0		29
D.623	Social assistance benefits in cash				52		52	0		52
D.7	Other current transfers	6	62	104	36	36	244	55		299
D.71	Net non-life insurance premiums		47				47	11		58
D.711	Net non-life direct insurance premiums		44				44			44
D.712	Net non-life reinsurance premiums		3				3	11		14
D.72	Non-life insurance claims	6	15	1	35	0	57	3		60
D.721	Non-life direct insurance claims	6		1	35		42	3		45
D.722	Non-life reinsurance claims		15				15	0		15
D.73	Current transfers within general government			96			96	0		96
D.74	Current international cooperation			1			1	22		23
D.75	Miscellaneous current transfers	0	0	6	1	36	43	10		53
D.751	Current transfers to NPISHs					36	36			36
D.752	Current transfers between households				1		1	7		8
D.759	Other miscellaneous current transfers			6			6	3		9
D.76	VAT- and GNI-based EU own resources							9		9
B.6g	Disposable income, gross									
B.6n	Disposable income, net									

Table 8.7 — Account II.3: redistribution of income in kind account

Uses

Total	Goods and Services account (Corresponding entries of the)	Rest of the world account (Corresponding entries of the)	Total economy S.1	NPISHs S.15	Households S.14	General government S.13	Financial corporations S.12	Non-financial corporations S.11		Transactions and balancing items
									B.6g	Disposable income, gross
									B.6n	Disposable income, net
215			215	31		184			D.63	Social transfers in kind
211			211	31		180			D.631	Social transfers in kind — non-market production
4			4			4			D.632	Social transfers in kind — purchased market production
1 826			1 826	6	1 434	133	25	228	B.7g	Adjusted disposable income, gross
1 604			1 604	3	1 411	106	13	71	B.7n	Adjusted disposable income, net

Resources

	Transactions and balancing items	Non-financial corporations S.11	Financial corporations S.12	General government S.13	Households S.14	NPISHs S.15	Total economy S.1	Rest of the world account (Corresponding entries of the)	Goods and services account (Corresponding entries of the)	Total
B.6g	Disposable income, gross	228	25	317	1 219	37	1 826			1 826
B.6n	Disposable income, net	71	13	290	1 196	34	1 604			1 604
D.63	Social transfers in kind				215		215			215
D.631	Social transfers in kind — non-market production				211		211			211
D.632	Social transfers in kind — purchased market production				4		4			4
B.7g	Adjusted disposable income, gross									
B.7n	Adjusted disposable income, net									

Use of income account (II.4)

8.36 For the institutional sectors with final consumption, the use of income account shows how disposable income (or adjusted disposable income) is divided between final consumption expenditure (or actual final consumption) and saving.

8.37 In the system, only government, NPISHs and households have final consumption. In addition, the use of income account includes, for households and for pension funds, an adjustment item (D.8 — adjustment for the change in pension entitlements) which relates to the way that transactions between households and pension funds are recorded. This is explained in the chapter on distributive transactions, paragraph 4.141.

Use of disposable income account (II.4.1)

8.38 The use of disposable income account includes the concept of final consumption expenditure financed by the various sectors concerned: households, general government, and non-profit institutions serving households.

8.39 The balancing item in the use of disposable income account is saving.

Use of adjusted disposable income account (II.4.2)

8.40 This account links with the redistribution of income in kind account (II.3). The use of adjusted disposable income account includes the concept of actual final consumption, which corresponds to the value of goods and services actually at the disposal of households for final consumption, even if their acquisition is financed by general government or non-profit institutions serving households.

Consequently, the actual final consumption of general government and NPISHs corresponds only to collective final consumption.

8.41 At the level of the total economy, final consumption expenditure and actual final consumption are equal; it is only the distribution over the institutional sectors which differs. The same is true of disposable income and adjusted disposable income.

8.42 Saving is the balancing item in both versions of the use of income account. Its value is identical for all sectors, regardless of whether it is obtained by subtracting final consumption expenditure from disposable income, or by subtracting actual final consumption from adjusted disposable income.

8.43 Saving is the (positive or negative) amount resulting from current transactions which establishes the link with accumulation. If saving is positive, non-spent income is used for the acquisition of assets or for paying off liabilities. If saving is negative, certain assets are liquidated or certain liabilities increase.

Table 8.8 — Account II.4.1: use of disposable income account

Uses

Corresponding entries of the			S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.6g	Disposable income, gross
									B.6n	Disposable income, net
1 399			1 399	32	1 015	352			P.3	Final consumption expenditure
1 230			1 230	31	1 015	184			P.31	Individual consumption expenditure
169			169	1		168			P.32	Collective consumption expenditure
11		0	11	0		0	11	0	D.8	Adjustment for the change in pension entitlements
427			427	5	215	–35	14	228	B.8g	Saving, gross
205			205	2	192	–62	2	71	B.8n	Saving, net
–13		–13							B.12	Current external balance

Resources

		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.6g	Disposable income, gross	228	25	317	1 219	37	1 826			1 826
B.6n	Disposable income, net	71	13	290	1 196	34	1 604			1 604
P.3	Final consumption expenditure								1 399	1 399
P.31	Individual consumption expenditure								1 230	1 230
P.32	Collective consumption expenditure								169	169
D.8	Adjustment for the change in pension entitlements				11		11	0		11
B.8g	Saving, gross									
B.8n	Saving, net									
B.12	Current external balance									

Table 8.9 — Account II.4.2: use of adjusted disposable income account

Uses

Total	Goods and Services account	Rest of the world account	Total economy (S.1)	NPISHs (S.15)	Households (S.14)	General government (S.13)	Financial corporations (S.12)	Non-financial corporations (S.11)		Transactions and balancing items
	Corresponding entries of the									
									B.7g	Adjusted disposable income, gross
									B.7n	Adjusted disposable income, net
1 399			1 399	1	1 230	168			P.4	Actual final consumption
1 230			1 230		1 230				P.41	Actual individual consumption
169			169	1		168			P.42	Actual collective consumption
11		0	11	0		0	11	0	D.8	Adjustment for the change in pension entitlements
427			427	5	215	−35	14	228	B.8g	Saving, gross
205			205	2	192	−62	2	71	B.8n	Saving, net
−13		−13							B.12	Current external balance

Resources

	Transactions and balancing items	Non-financial corporations (S.11)	Financial corporations (S.12)	General government (S.13)	Households (S.14)	NPISHs (S.15)	Total economy (S.1)	Rest of the world account	Goods and services account	Total
								Corresponding entries of the		
B.7g	Adjusted disposable income, gross	228	25	133	1 434	6	1 826			1 826
B.7n	Adjusted disposable income, net	71	13	106	1 411	3	1 604			1 604
P.4	Actual final consumption								1 399	1 399
P.41	Actual individual consumption								1 230	1 230
P.42	Actual collective consumption								169	169
D.8	Adjustment for the change in pension entitlements				11		11	0		11
B.8g	Saving, gross									
B.8n	Saving, net									
B.12	Current external balance									

Accumulation accounts (III)

8.44 The accumulation accounts are flow accounts. They record the various causes of changes in the assets and liabilities of units and the change in their net worth.

8.45 Changes in assets are recorded on the left-hand side of the accounts (plus or minus), changes in liabilities and net worth on the right-hand side (plus or minus).

Capital account (III.1)

8.46 The capital account records acquisitions less disposals of non-financial assets by resident units and measures the change in net worth due to saving (final balancing item in the current accounts) and capital transfers.

8.47 The capital account makes it possible to determine the extent to which acquisitions less disposals of non-financial assets have been financed out of saving and by capital transfers. It shows a net lending corresponding to the amount available to a unit or sector for financing, directly or indirectly, other units or sectors, or a net borrowing corresponding to the amount which a unit or sector is obliged to borrow from other units or sectors.

Change in net worth due to saving and capital transfers account (III.1.1)

8.48 This account makes it possible to determine the change in net worth due to saving and capital transfers, which corresponds to net saving plus capital transfers receivable, minus capital transfers payable.

Acquisitions of non-financial assets account (III.1.2)

8.49 This account records acquisitions less disposals of non-financial assets in order to return from the concept of change in net worth due to saving and capital transfers to net lending or borrowing.

Financial account (III.2)

8.50 The financial account records, by type of financial instrument, the changes in the financial assets and liabilities that compose net lending or borrowing. As these should match the financial surplus or deficit balancing items of the capital account, carried forward to this account as the first entry on the changes in liabilities and net worth side, there is no balancing item in this account.

8.51 The classification of assets and liabilities used in the financial account is identical to that used in the balance sheets.

Table 8.10 — Account III.1.1: change in net worth due to saving and capital transfers account

Changes in assets										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.8n	Saving, net
									B.12	Current external balance
									D.9r	Capital transfers, receivable
									D.91r	Capital taxes, receivable
									D.92r	Investment grants, receivable
									D.99r	Other capital transfers, receivable
									D.9p	Capital transfers, payable
									D.91p	Capital taxes, payable
									D.92p	Investment grants, payable
									D.99p	Other capital transfers, payable
192		–29	221	20	236	–81	–16	62	B.101	Changes in net worth due to saving and capital transfers

Changes in liabilities and net worth										
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.8n	Saving, net	71	2	–62	192	2	205			205
B.12	Current external balance							–13		–13
D.9r	Capital transfers, receivable	33	0	6	23	0	62	4		66
D.91r	Capital taxes, receivable			2			2			2
D.92r	Investment grants, receivable	23	0	0	0	0	23	4		27
D.99r	Other capital transfers, receivable	10		4	23		37			37
D.9p	Capital transfers, payable	–16	–7	–34	–5	–3	–65	–1		–66
D.91p	Capital taxes, payable	0	0	0	–2	0	–2	0		–2
D.92p	Investment grants, payable			–27			–27			–27

		Changes in liabilities and net worth								
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
D.99p	Other capital transfers, payable	–16	–7	–7	–3	–3	–36	–1		–37
B.101	Changes in net worth due to saving and capital transfers	88	–5	–90	210	–1	202	–10		192

Table 8.11 — Account III.1.2: acquisition of non-financial assets account

Changes in assets										
Corresponding entries of the			S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.101	Changes in net worth due to saving and capital transfers
414			414	5	55	38	8	308	P.5g	Gross capital formation
192			192	2	32	11	–4	151	P.5n	Net capital formation
376			376	5	48	35	8	280	P.51g	Gross fixed capital formation
359			359	5	48	35	8	263	P.511	Acquisitions less disposals of fixed assets
358			358	5	45	38	8	262	P.5111	Acquisitions of new fixed assets
9			9	1	3	0	0	5	P.5112	Acquisitions of existing fixed assets
–8			–8	–1	0	–3		–4	P.5113	Disposal of existing fixed assets
17			17					17	P.512	Costs of ownership transfer on non-produced assets
–222			–222	–3	–23	–27	–12	–157	P.51c	Consumption of fixed capital
28			28	0	2	0	0	26	P.52	Changes in inventories
10			10	0	5	3	0	2	P.53	Acquisitions less disposals of valuables
0			0	1	4	2	0	–7	NP	Acquisitions less disposals of non-produced assets
0			0	1	3	2	0	–6	NP.1	Acquisitions less disposals of natural resources
0		0	0	0	1	0	0	–1	NP.2	Acquisitions less disposals of contracts, leases and licences
0		0	0				0	0	NP.3	Purchases less sales of goodwill and marketing assets
0		–10	10	–4	174	–103	–1	–56	B.9	Net lending (+) net borrowing (–)

Table 8.11 — Account III.1.2: acquisition of non-financial assets account (continued)

	Changes in liabilities and net worth									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.101	Changes in net worth due to saving and capital transfers	88	–5	–90	210	–1	202	–10		192
P.5g	Gross capital formation								414	414
P.5n	Net capital formation								192	192
P.51g	Gross fixed capital formation								376	376
P.511	Acquisitions less disposals of fixed assets								359	359
P.5111	Acquisitions of new fixed assets								358	358
P.5112	Acquisitions of existing fixed assets								9	9
P.5113	Disposal of existing fixed assets								–8	–8
P.512	Costs of ownership transfer on non-produced assets								17	17
P.51c	Consumption of fixed capital								–222	–222
P.52	Changes in inventories								28	28
P.53	Acquisitions less disposals of valuables								10	10
NP	Acquisitions less disposals of non-produced assets								0	0
NP.1	Acquisitions less disposals of natural resources								0	0
NP.2	Acquisitions less disposals of contracts, leases and licences									
NP.3	Purchases less sales of goodwill and marketing assets									
B.9	Net lending (+) net borrowing (–)									

Table 8.12 — Account III.2: financial account

Changes in assets										
Corresponding entries of the			S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
									B.9	Net lending (+)/net borrowing (–)
483		47	436	2	189	–10	172	83	F	Net acquisition of financial assets
0		1	–1				–1		F.1	Monetary gold and SDRs
0		1	–1				–1		F.11	Monetary gold
0		0	0				0		F.12	SDRs
100		11	89	2	64	–26	10	39	F.2	Currency and deposits
36		3	33	1	10	2	15	5	F.21	Currency
28		2	26	1	27	–27	–5	30	F.22	Transferable deposits
–5			–5				–5		F.221	Inter-bank positions
33		2	31	1	27	–27	0	30	F.229	Other transferable deposits
36		6	30	0	27	–1	0	4	F.29	Other deposits
95		9	86	–1	10	4	66	7	F.3	Debt securities
29		2	27	0	3	1	13	10	F.31	Short-term
66		7	59	–1	7	3	53	–3	F.32	Long-term
82		4	78	0	3	3	53	19	F.4	Loans
25		3	22	0	3	1	4	14	F.41	Short-term
57		1	56	0	0	2	49	5	F.42	Long-term
119		12	107	0	66	3	28	10	F.5	Equity and investment fund shares
103		12	91	0	53	3	25	10	F.51	Equity
87		10	77	0	48	1	23	5	F.511	Listed shares
9		2	7	0	2	1	1	3	F.512	Unlisted shares
7		0	7	0	3	1	1	2	F.519	Other equity
16		0	16	0	13	0	3	0	F.52	Investment fund shares/units
7		0	7	0	5	0	2	0	F.521	Money market fund shares/units

Changes in assets										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and balancing items
9		0	9	0	8	0	1	0	F.522	Non-MMF investment fund shares/units
48		0	48	0	39	1	7	1	F.6	Insurance, pension and standardised guarantee schemes
7		0	7	0	4	0	2	1	F.61	Non-life insurance technical reserves
22		0	22	0	22	0	0	0	F.62	Life insurance and annuity entitlements
11		0	11		11				F.63	Pension entitlements
3		0	3				3		F.64	Claim of pension funds on pension managers
2		0	2		2				F.65	Entitlements to non-pension benefits
3		0	3	0	0	1	2	0	F.66	Provisions for calls under standardised guarantees
14		0	14	0	3	0	8	3	F.7	Financial derivatives and employee stock options
12		0	12	0	1	0	8	3	F.71	Financial derivatives
5		0	5	0	1	0	3	1	F.711	Options
7		0	7	0	0	0	5	2	F.712	Forwards
2			2		2			0	F.72	Employee stock options
25		10	15	1	4	5	1	4	F.8	Other accounts receivable/payable
15		8	7		3	1		3	F.81	Trade credits and advances
10		2	8	1	1	4	1	1	F.89	Other accounts receivable/payable, excluding trade credits and advances

Table 8.12 — Account III.2: Financial account (continued)

	Changes in liabilities and net worth									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
B.9	Net lending (+)/net borrowing (–)	–56	–1	–103	174	–4	10	–10		0
F	Net incurrence of financial liabilities	139	173	93	15	6	426	57		483
F.1	Monetary gold and SDRs									
F.11	Monetary gold									
F.12	SDRs							0		0
F.2	Currency and deposits		65	37			102	–2		100
F.21	Currency			35			35	1		36
F.22	Transferable deposits		26	2			28	0		28
F.221	Inter-bank positions		–5				–5			–5
F.229	Other transferable deposits		31	2			33			33
F.29	Other deposits		39				39	–3		36
F.3	Debt securities	6	30	38	0	0	74	21		95
F.31	Short-term	2	18	4	0	0	24	5		29
F.32	Long-term	4	12	34	0	0	50	16		66
F.4	Loans	21	0	9	11	6	47	35		82
F.41	Short-term	4	0	3	2	2	11	14		25
F.42	Long-term	17	0	6	9	4	36	21		57
F.5	Equity and investment fund shares	83	22				105	14		119
F.51	Equity	83	11				94	9		103
F.511	Listed shares	77	7				84	3		87
F.512	Unlisted shares	3	4				7	2		9
F.519	Other equity	3					3	4		7
F.52	Investment fund shares/units		11				11	5		16
F.521	Money market fund shares/units		5				5	2		7

	Changes in liabilities and net worth									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Transactions and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
F.522	Non-MMF investment fund shares/units		6				6	3		9
F.6	Insurance, pension and standardised guarantee schemes		48	0			48	0		48
F.61	Non-life insurance technical reserves		7				7	0		7
F.62	Life insurance and annuity entitlements		22				22	0		22
F.63	Pension entitlements		11				11	0		11
F.64	Claim of pension funds on pension managers		3				3	0		3
F.65	Entitlements to non-pension benefits		2				2	0		2
F.66	Provisions for calls under standardised guarantees		3	0			3	0		3
F.7	Financial derivatives and employee stock options	3	8	0	0	0	11	3		14
F.71	Financial derivatives	2	7	0	0	0	9	3		12
F.711	Options	2	2	0	0	0	4	1		5
F.712	Forwards	0	5	0	0	0	5	2		7
F.72	Employee stock options	1	1				2			2
F.8	Other accounts receivable/payable	26		9	4		39	–14		25
F.81	Trade credits and advances	6	0	6	4	0	16	–1		15
F.89	Other accounts receivable/payable, excluding trade credits and advances	20	0	3	0	0	23	–13		10

Other changes in assets account (III.3)

8.52 The other changes in assets account records changes in assets and liabilities of units, other than in connection with saving and voluntary transfers of wealth, the latter being recorded in the capital and financial accounts. It is divided into: the other changes in volume of assets account (III.3.1) and the revaluation account (III.3.2).

Other changes in volume of assets account (III.3.1)

8.53 The movements recorded in the other changes in volume of assets account affect the net worth of the balance sheets of the units, sectors and subsectors concerned. This change, called change in net worth due to other changes in volume of assets, is the balancing item in the account.

Revaluation account (III.3.2)

8.54 The revaluation account records changes in the value of assets and liabilities due to changes in their prices.

For a given asset or liability, this change is measured as either:

((a) the difference between its value at the end of the accounting period and its value at the start of the accounting period or the date on which it was first entered in the balance sheet; or

((b) the difference between its value at the date on which it was written out of the balance sheet and its value at the start of the accounting period or the date on which it was first entered in the balance sheet.

This difference is called 'nominal holding gain (or loss)'.

A nominal holding gain corresponds to the positive revaluation of an asset or the negative revaluation of a (financial) liability.

A nominal holding loss corresponds to the negative revaluation of an asset or the positive revaluation of a (financial) liability.

8.55 The flows recorded in the revaluation account change the net worth of the balance sheets of the units concerned. This change, called 'change in net worth due to nominal holding gains and losses', is the balancing item in the account. It is recorded on the changes in liabilities and net worth side.

8.56 The revaluation account is broken down into two subaccounts: the neutral holding gains and losses account (III.3.2.1) and the real holding gains and losses account (III.3.2.2).

Neutral holding gains and losses account (III.3.2.1)

8.57 The neutral holding gains and losses account records changes in the value of assets and liabilities in proportion to changes in the general price level. Such changes correspond to the revaluation necessary to maintain the general purchasing power of assets and liabilities. The general price index to be applied for this calculation is the price index for final national uses, excluding changes in inventories.

Real holding gains and losses account (III.3.2.2)

8.58 Real holding gains and losses measure the difference between nominal holding gains and losses and neutral holding gains and losses.

8.59 If the nominal holding gains net of the nominal holding losses on a given asset exceed the neutral holding gains net of the neutral holding losses, there is a real holding gain on the asset for the unit holding it. This gain reflects the fact that the actual price of the asset has, on average, risen faster than the general price level. Conversely, a drop in the relative price of the asset produces a real holding loss for the unit holding it.

By the same token, a rise in the relative price of a liability produces a real holding loss on liabilities, while a drop in the relative price of a liability generates a real holding gain on liabilities.

Table 8.13 — Account III.3.1: other changes in volume of assets account

Changes in assets								
Total	S.1 Total economy	S.15 NPISHs	S.14 Households	S.13 General government	S.12 Financial corporations	S.11 Non-financial corporations		Other flows
33	33	0	0	7	0	26	K.1	Economic appearance of assets
3	3			3			AN.1	Produced non-financial assets
30	30	0	0	4	0	26	AN.2	Non-produced non-financial assets
26	26			4		22	AN.21	Natural resources
4	4					4	AN.22	Contracts, leases and licences
0	0						AN.23	Purchases less sales of goodwill and marketing assets
–11	–11	0	0	–2	0	–9	K.2	Economic disappearance of non-produced assets
–8	–8	0	0	–2	0	–6	K.21	Depletion of natural resources
–8	–8			–2		–6	AN.21	Natural resources
–3	–3	0	0	0	0	–3	K.22	Other economic disappearance of non-produced assets
0	0						AN.21	Natural resources
–1	–1					–1	AN.22	Contracts, leases and licences
–2	–2					–2	AN.23	Purchases less sales of goodwill and marketing assets
–11	–11	0	0	–6	0	–5	K.3	Catastrophic losses
–9	–9			–4		–5	AN.1	Produced non-financial assets
–2	–2			–2			AN.2	Non-produced non-financial assets
0	0						AF	Financial assets/liabilities
0	0	0	0	5	0	–5	K.4	Uncompensated seizures
0	0			1		–1	AN.1	Produced non-financial assets
0	0			4		–4	AN.2	Non-produced non-financial assets
0	0				–		AF	Financial assets
2	2	0	0	0	1	1	K.5	Other changes in volume n.e.c.
1	1					1	AN.1	Produced non-financial assets
0	0						AN.2	Non-produced non-financial assets
1	1				1		AF	Financial assets/liabilities
0	0	0	0	–4	–2	6	K.6	Changes in classification
2	2	0	0	–4	0	6	K.61	Changes in sector classification and structure

Changes in assets								
Total	S.1 Total economy	S.15 NPISHs	S.14 Households	S.13 General government	S.12 Financial corporations	S.11 Non-financial corporations		Other flows
0	0			−3		3	AN.1	Produced non-financial assets
0	0			−1		1	AN.2	Non-produced non-financial assets
2	2					2	AF	Financial assets/liabilities
−2	−2	0	0	0	−2	0	K.62	Changes in classification of assets and liabilities
−2	−2				−2		AN.1	Produced non-financial assets
0	0			0	0	0	AN.2	Non-produced non-financial assets
0	0			0	0	0	AF	Financial assets/liabilities
13	13	0	0	0	−1	14		Total other changes in volume
−7	−7	0	0	−3	−2	−2	AN.1	Produced non-financial assets
−2	−2			−3		1	AN.11	Fixed assets
−3	−3					−3	AN.12	Inventories
−2	−2				−2		AN.13	Valuables
17	17	0	0	3	0	14	AN.2	Non-produced non-financial assets
9	9	0	0	1	−2	10	AN.21	Natural resources
6	6			2		4	AN.22	Contracts, leases and licences
0	0					0	AN.23	Purchases less sales of goodwill and marketing assets
3	3	0	0	0	1	2	AF	Financial assets
0	0				0	0	AF.1	Monetary gold and SDRs
0	0				0	0	AF.2	Currency and deposits
0	0				0	0	AF.3	Debt securities
					0	0	AF.4	Loans
2	2					2	AF.5	Equity and investment fund shares/units
1	1				1		AF.6	Insurance, pension and standardised guarantee schemes
0	0						AF.7	Financial derivatives and employee stock options
0	0						AF.8	Other accounts receivable/payable
							B.102	Changes in net worth due to other changes in volume of assets

Table 8.13 — Account III.3.1: other changes in volume of assets account (continued)

	Changes in liabilities and net worth							
	Other flows	S.11 Non-financial corporations	S.12 Financial corporations	S.13 General government	S.14 Households	S.15 NPISHs	S.1 Total economy	Total
K.1	Economic appearance of assets							
AN.1	Produced non-financial assets							
AN.2	Non-produced non-financial assets							
AN.21	Natural resources							
AN.22	Contracts, leases and licences							
AN.23	Purchases less sales of goodwill and marketing assets							
K.2	Economic disappearance of non-produced assets							
K.21	Depletion of natural resources							
AN.21	Natural resources							
K.22	Other economic disappearance of non-produced assets							
AN.21	Natural resources							
AN.22	Contracts, leases and licences							
AN.23	Purchases less sales of goodwill and marketing assets							
K.3	Catastrophic losses							
AN.1	Produced non-financial assets							
AN.2	Non-produced non-financial assets							
AF	Financial assets/liabilities							
K.4	Uncompensated seizures							
AN.1	Produced non-financial assets							
AN.2	Non-produced non-financial assets							
AF	Financial assets							
K.5	Other changes in volume n.e.c.	0	0	0	1	0	1	1
AN.1	Produced non-financial assets							
AN.2	Non-produced non-financial assets							
AF	Financial assets/liabilities	0	0	0	1	0	1	1
K.6	Changes in classification	0	0	2	0	0	2	2

Changes in liabilities and net worth

	Other flows	S.11 Non-financial corporations	S.12 Financial corporations	S.13 General government	S.14 Households	S.15 NPISHs	S.1 Total economy	Total
K.61	Changes in sector classification and structure	2	0	2	0	0	2	2
AN.1	Produced non-financial assets							
AN.2	Non-produced non-financial assets							
AF	Financial assets/liabilities	0	0	2	0	0	2	2
K.62	Changes in classification of assets and liabilities	0	0	0	0	0	0	0
AN.1	Produced non-financial assets							
AN.2	Non-produced non-financial assets							
AF	Financial assets/liabilities	0	0	0	0	0	0	0
	Total other changes in volume	0	0	2	1	0	3	3
AN.1	Produced non-financial assets							
AN.11	Fixed assets							
AN.12	Inventories							
AN.13	Valuables							
AN.2	Non-produced non-financial assets							
AN.21	Natural resources							
AN.22	Contracts, leases and licences							
AN.23	Purchases less sales of goodwill and marketing assets							
AF	Financial assets	0	0	2	1	0	3	3
AF.1	Monetary gold and SDRs							
AF.2	Currency and deposits							
AF.3	Debt securities							
AF.4	Loans						0	0
AF.5	Equity and investment fund shares/units			2			2	2
AF.6	Insurance, pension and standardised guarantee schemes				1		1	1
AF.7	Financial derivatives and employee stock options							
AF.8	Other accounts receivable/payable							
B.102	Changes in net worth due to other changes in volume of assets	14	–1	–2	–1	0	10	10

Table 8.14 — Account III.3.2: revaluation account

Changes in assets										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Other flows
									K.7	Nominal holding gains/losses
280			280	8	80	44	4	144	AN	Non-financial assets
126			126	5	35	21	2	63	AN.1	Produced non-financial assets
111			111	5	28	18	2	58	AN.11	Fixed assets
7			7		2	1		4	AN.12	Inventories
8			8		5	2		1	AN.13	Valuables
154			154	3	45	23	2	81	AN.2	Non-produced non-financial assets
152			152	3	45	23	1	80	AN.21	Natural resources
2			2				1	1	AN.22	Contracts, leases and licences
									AN.23	Purchases less sales of goodwill and marketing assets
91		7	84	2	16	1	57	8	AF	Financial assets/liabilities
12			12			1	11		AF.1	Monetary gold and SDRs
0			0						AF.2	Currency and deposits
44		4	40	1	6		30	3	AF.3	Debt securities
0			0						AF.4	Loans
35		3	32	1	10		16	5	AF.5	Equity and investment fund shares/units
0			0						AF.6	Insurance, pension and standardised guarantee schemes
0			0						AF.7	Financial derivatives and employee stock options
0			0						AF.8	Other accounts receivable/payable
									B.103	Changes in net worth due to nominal holding gains/losses

Table 8.14 — Account III.3.2: revaluation account (continued)

	Changes in liabilities and net worth									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Other flows	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
K.7	Nominal holding gains and losses									
AN	Non-financial assets									
AN.1	Produced non-financial assets									
AN.11	Fixed assets									
AN.12	Inventories									
AN.13	Valuables									
AN.2	Non-produced non-financial assets									
AN.21	Natural resources									
AN.22	Contracts, leases and licences									
AN.23	Purchases less sales of goodwill and marketing assets									
AF	Financial assets/liabilities	18	51	7	0	0	76	15		91
AF.1	Monetary gold and SDRs							12		12
AF.2	Currency and deposits									
AF.3	Debt securities	1	34	7			42	2		44
AF.4	Loans									
AF.5	Equity and investment fund shares/units	17	17				34	1		35
AF.6	Insurance, pension and standardised guarantee schemes									
AF.7	Financial derivatives and employee stock options									
AF.8	Other accounts receivable/payable									
B.103	Changes in net worth due to nominal holding gains/losses	134	10	38	96	10	288	4		292

Table 8.14 — Account III.3.2.1: neutral holding gains and losses account

Changes in assets											
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11			
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Other flows and balancing items	
									K.71	Neutral holding gains and losses	
198			198	6	56	32	3	101	AN	Non-financial assets	
121			121	5	34	20	2	60	AN.1	Produced non-financial assets	
111			111	5	28	18	2	58	AN.11	Fixed assets	
4			4		2	1		1	AN.12	Inventories	
6			6		4	1		1	AN.13	Valuables	
77			77	1	22	12	1	41	AN.2	Non-produced non-financial assets	
76			76	1	22	12	1	40	AN.21	Natural resources	
1			1					1	AN.22	Contracts, leases and licences	
									AN.23	Purchases less sales of goodwill and marketing assets	
148		12	136	3	36	8	71	18	AF	Financial assets/liabilities	
16			16			2	14		AF.1	Monetary gold and SDRs	
32		2	30	2	17	3		8	AF.2	Currency and deposits	
28		3	25	1	4		18	2	AF.3	Debt securities	
29		1	28			3	24	1	AF.4	Loans	
28		2	26		9		14	3	AF.5	Equity and investment fund shares/units	
8		1	7		5		1	1	AF.6	Insurance, pension and standardised guarantee schemes	
0			0						AF.7	Financial derivatives and employee stock options	
7		3	4		1			3	AF.8	Other accounts receivable/payable	
									B.1031	Changes in net worth due to neutral holding gains/losses	

Table 8.14 — Account III.3.2.1: neutral holding gains and losses account (continued)

		Changes in liabilities and net worth								
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
Code	Other flows and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
K.71	Neutral holding gains and losses									
AN	Non-financial assets									
AN.1	Produced non-financial assets									
AN.11	Fixed assets									
AN.12	Inventories									
AN.13	Valuables									
AN.2	Non-produced non-financial assets									
AN.21	Natural resources									
AN.22	Contracts, leases and licences									
AN.23	Purchases less sales of goodwill and marketing assets									
AF	Financial assets/liabilities	37	68	13	5	3	126	22		148
AF.1	Monetary gold and SDRs							16		16
AF.2	Currency and deposits	1	26	2		1	30	2		32
AF.3	Debt securities	1	21	4			26	2		28
AF.4	Loans	18		7	3	1	29			29
AF.5	Equity and investment fund shares/units	14	14				28			28
AF.6	Insurance, pension and standardised guarantee schemes		7				7	1		8
AF.7	Financial derivatives and employee stock options									
AF.8	Other accounts receivable/payable	3			2	1	6	1		7
B.1031	Changes in net worth due to neutral holding gains/losses	82	6	27	87	6	208	6		214

Table 8.14 — Account III.3.2.2: real holding gains and losses account

Changes in assets										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Other flows and balancing items
									K.72	Real holding gains and losses
82			82	2	24	12	1	43	AN	Non-financial assets
5			5	0	1	1	0	3	AN.1	Produced non-financial assets
				0	0	0	0	0	AN.11	Fixed assets
3			3	0	0	0	0	3	AN.12	Inventories
2			2	0	1	1	0	0	AN.13	Valuables
77			77	2	23	11	1	40	AN.2	Non-produced non-financial assets
76			76	2	23	11	0	40	AN.21	Natural resources
1			1	0	0	0	1	0	AN.22	Contracts, leases and licences
									AN.23	Purchases less sales of goodwill and marketing assets
–57		–5	–52	–1	–20	–7	–14	–10	AF	Financial assets/liabilities
–4		0	–4	0	0	–1	–3	0	AF.1	Monetary gold and SDRs
–32		–2	–30	–2	–17	–3	0	–8	AF.2	Currency and deposits
16		1	15	0	2	0	12	1	AF.3	Debt securities
–29		–1	–28	0	0	–3	–24	–1	AF.4	Loans
7		1	6	1	1	0	2	2	AF.5	Equity and investment fund shares/units
–8		–1	–7	0	–5	0	–1	–1	AF.6	Insurance, pension and standardised guarantee schemes
				0	0	0	0	0	AF.7	Financial derivatives and employee stock options
–7		–3	–4	0	–1	0	0	–3	AF.8	Other accounts receivable/payable
									B.1032	Changes in net worth due to real holding gains/losses

Table 8.14 — Account III.3.2.2: real holding gains and losses account (continued)

		Changes in liabilities and net worth								
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Other flows and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
K.72	Real holding gains and losses									
AN	Non-financial assets									
AN.1	Produced non-financial assets									
AN.11	Fixed assets									
AN.12	Inventories									
AN.13	Valuables									
AN.2	Non-produced non-financial assets									
AN.21	Natural resources									
AN.22	Contracts, leases and licences									
AN.23	Purchases less sales of goodwill and marketing assets									
AF	Financial assets/liabilities	–19	–17	–6	–5	–3	–50	–7		–57
AF.1	Monetary gold and SDRs	0	0	0	0	0	0	–4		–4
AF.2	Currency and deposits	–1	–26	–2	0	–1	–30	–2		–32
AF.3	Debt securities	0	13	3	0	0	16	0		16
AF.4	Loans	–18	0	–7	–3	–1	–29	0		–29
AF.5	Equity and investment fund shares/units	3	3	0	0	0	6	1		7
AF.6	Insurance, pension and standardised guarantee schemes		–7				–7	–1		–8
AF.7	Financial derivatives and employee stock options	0	0	0	0	0	0	0		0
AF.8	Other accounts receivable/payable	–3	0	0	–2	–1	–6	–1		–7
B.1032	Changes in net worth due to real holding gains/losses	52	4	11	9	4	80	–2		78

Balance sheets (IV)

8.60 The aim of the balance sheets is to give a picture of the assets, liabilities and net worth of units at the start and end of the accounting period and of changes between balance sheets. The sequence is as follows:

(a) opening balance sheet (IV.1);

(b) changes in balance sheet (IV.2);

(c) closing balance sheet (IV.3).

Opening balance sheet (IV.1)

8.61 The opening balance sheet records the value of assets and liabilities held by units at the start of the accounting period.

These items are categorised on the basis of the classification of assets and liabilities.

They are valued at prices current at the start of the accounting period. The difference between assets and liabilities — the balancing item in the account — is the net worth at the start of the accounting period.

Changes in balance sheet (IV.2)

8.62 The changes in balance sheet account records changes in the value of assets and liabilities in the course of the accounting period and aggregates the amounts recorded in the various accumulation accounts, i.e. change in net worth due to saving and capital transfers, change in net worth due to other volume changes in assets and change in net worth due to nominal holding gains and losses.

Closing balance sheet (IV.3)

8.63 The closing balance sheet records the value of assets and liabilities held by units at the end of the accounting period. These items are categorised on the basis of the same classification used in the opening balance sheet and are valued at prices current at the end of the period.

The difference between assets and liabilities is the net worth at the end of the accounting period.

8.64 The value of an asset or liability in the closing balance sheets is equal to the sum of its value in the opening balance sheets and the amount recorded for the said item in the changes in balance sheet account.

Table 8.15 — Account IV.1: balance sheets — opening balance sheet

Assets										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Stocks and changes in assets
4 621			4 621	159	1 429	789	93	2 151	AN	Non-financial assets
2 818			2 818	124	856	497	67	1 274	AN.1	Produced non-financial assets
2 579			2 579	121	713	467	52	1 226	AN.11	Fixed assets
114			114	1	48	22		43	AN.12	Inventories
125			125	2	95	8	15	5	AN.13	Valuables
1 803			1 803	35	573	292	26	877	AN.2	Non-produced non-financial assets
1 781			1 781	35	573	286	23	864	AN.21	Natural resources
22			22			6	3	13	AN.22	Contracts, leases and licences
0			0					3	AN.23	Purchases less sales of goodwill and marketing assets
9 036		805	8 231	172	3 260	396	3 421	982	AF	Financial assets/liabilities
770			770			80	690		AF.1	Monetary gold and SDRs
1 587		105	1 482	110	840	150		382	AF.2	Currency and deposits
1 388		125	1 263	25	198		950	90	AF.3	Debt securities
1 454		70	1 384	8	24	115	1 187	50	AF.4	Loans
2 959		345	2 614	22	1 749	12	551	280	AF.5	Equity and investment fund shares/units
496		26	470	4	391	20	30	25	AF.6	Insurance, pension and standardised guarantee schemes
21		0	21	0	3	0	13	5	AF.7	Financial derivatives and employee stock options
361		134	227	3	55	19		150	AF.8	Other accounts receivable/payable
									B.90	Net worth

Table 8.15 — Account IV.1: balance sheets — opening balance sheet (continued)

	Liabilities and net worth									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Stocks and changes in liabilities	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
AN	Non-financial assets									
AN.1	Produced non-financial assets									
AN.11	Fixed assets									
AN.12	Inventories									
AN.13	Valuables									
AN.2	Non-produced non-financial assets									
AN.21	Natural resources									
AN.22	Contracts, leases and licences									
AN.23	Purchases less sales of goodwill and marketing assets									
AF	Financial assets/liabilities	3 221	3 544	687	189	121	7 762	1 274		9 036
AF.1	Monetary gold and SDRs						0	770		770
AF.2	Currency and deposits	40	1 281	102	10	38	1 471	116		1 587
AF.3	Debt securities	44	1 053	212	2		1 311	77		1 388
AF.4	Loans	897		328	169	43	1 437	17		1 454
AF.5	Equity and investment fund shares/units	1 987	765	4			2 756	203		2 959
AF.6	Insurance, pension and standardised guarantee schemes	12	435	19		5	471	25		496
AF.7	Financial derivatives and employee stock options	4	10				14	7		21
AF.8	Other accounts receivable/payable	237		22	8	35	302	59		361
B.90	Net worth	–88	–30	498	4 500	210	5 090	–469		4 621

Table 8.15 — Account IV.2: balance sheets — changes in balance sheet

Changes in assets										
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11		
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Stocks and change in assets
482			482	11	115	57	−4	301	AN	Non-financial assets
294			294	7	67	29	−4	195	AN.1	Produced non-financial assets
246			246	7	53	23	−2	165	AN.11	Fixed assets
32			32	0	4	1	0	27	AN.12	Inventories
16			16	0	10	5	−2	3	AN.13	Valuables
186			186	4	48	28	0	106	AN.2	Non-produced non-financial assets
178			178	4	48	26	−1	101	AN.21	Natural resources
8			8	0	0	2	1	5	AN.22	Contracts, leases and licences
0			0	0	0	0	0	0	AN.23	Purchases less sales of goodwill and marketing assets
577		54	523	4	205	−9	230	93	AF	Financial assets/liabilities
12		1	11	0	0	1	10	0	AF.1	Monetary gold and SDRs
100		11	89	2	64	−26	10	39	AF.2	Currency and deposits
139		13	126	0	16	4	96	10	AF.3	Debt securities
82		4	78	0	3	3	53	19	AF.4	Loans
156		15	141	1	76	3	44	17	AF.5	Equity and investment fund shares/units
49		0	49	0	39	1	8	1	AF.6	Insurance, pension and standardised guarantee schemes
14		0	14	0	3	0	8	3	AF.7	Financial derivatives and employee stock options
25		10	15	1	4	5	1	4	AF.8	Other accounts receivable/payable
									B.10	Changes in net worth, due to
									B.101	Saving and capital transfer
									B.102	Other changes in volume of assets
									B.103	Nominal holding gains/losses
									B.1031	Neutral holding gains/losses
									B.1032	Real holding gains/losses

Table 8.15 — Account IV. 2: balance sheets — changes in balance sheet (continued)

	Changes in liabilities and net worth									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Stocks and changes in liabilities	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
AN	Non-financial assets									
AN.1	Produced non-financial assets									
AN.11	Fixed assets									
AN.12	Inventories									
AN.13	Valuables									
AN.2	Non-produced non-financial assets									
AN.21	Natural resources									
AN.22	Contracts, leases and licences									
AN.23	Purchases less sales of goodwill and marketing assets									
AF	Financial assets/liabilities	157	224	102	16	6	505	72		577
AF.1	Monetary gold and SDRs							12		12
AF.2	Currency and deposits	0	65	37	0	0	102	–2		100
AF.3	Debt securities	7	64	45	0	0	116	23		139
AF.4	Loans	21	0	9	11	6	47	35		82
AF.5	Equity and investment fund shares/units	100	39	2	0	0	141	15		156
AF.6	Insurance, pension and standardised guarantee schemes	0	48	0	1	0	49	0		49
AF.7	Financial derivatives and employee stock options	3	8	0	0	0	11	3		14
AF.8	Other accounts receivable/payable	26	0	9	4	0	39	–14		25
B.10	Changes in net worth, due to	237	2	–54	304	9	500	–6		494
B.101	Saving and capital transfer	88	–5	90	210	–1	202	–10		192
B.102	Other changes in volume of assets	14	–1	–2	–1	0	10			10
B.103	Nominal holding gains/losses	134	10	38	96	10	288	4		292
B.1031	Neutral holding gains/losses	82	6	27	87	6	208	6		214
B.1032	Real holding gains/losses	52	4	11	9	4	80	–2		78

Table 8.15 — Account IV.3: balance sheets — closing balance sheet

Assets											
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11			
Total	Goods and Services account	Rest of the world account	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Stocks and changes in assets	
5 101			5 101	170	1 544	846	89	2 452	AN	Non-financial assets	
3 112			3 112	131	923	526	63	1 469	AN.1	Produced non-financial assets	
2 825			2 825	128	766	490	50	1 391	AN.11	Fixed assets	
146			146	1	52	23	0	70	AN.12	Inventories	
141			141	2	105	13	13	8	AN.13	Valuables	
1 989			1 989	39	621	320	26	983	AN.2	Non-produced non-financial assets	
1 959			1 959	39	621	312	22	965	AN.21	Natural resources	
30			30	0	0	8	4	18	AN.22	Contracts, leases and licences	
3			0	0	0	0	0	0	AN.23	Purchases less sales of goodwill and marketing assets	
9 613		859	8 754	176	3 465	387	3 651	1 075	AF	Financial assets/liabilities	
782		1	781	0	0	81	700	0	AF.1	Monetary gold and SDRs	
1 687		116	1 571	112	904	124	10	421	AF.2	Currency and deposits	
1 527		138	1 389	25	214	4	1 046	100	AF.3	Debt securities	
1 536		74	1 462	8	27	118	1 240	69	AF.4	Loans	
3 115		360	2 755	23	1 825	15	595	297	AF.5	Equity and investment fund shares/units	
545		26	519	4	430	21	38	26	AF.6	Insurance, pension and standardised guarantee schemes	
35			35	0	6	0	21	8	AF.7	Financial derivatives and employee stock options	
386		144	242	4	59	24	1	154	AF.8	Other accounts receivable/payable	
									B.90	Net worth	

Table 8.15 — Account IV.3: balance sheets — closing balance sheet (continued)

	Liabilities and net worth									
		S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
	Other flows and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	Rest of the world account	Goods and services account	Total
AN	Non-financial assets									
AN.1	Produced non-financial assets									
AN.11	Fixed assets									
AN.12	Inventories									
AN.13	Valuables									
AN.2	Non-produced non-financial assets									
AN.21	Natural resources									
AN.22	Contracts, leases and licences									
AN.23	Purchases less sales of goodwill and marketing assets									
AF	Financial assets/liabilities	3 378	3 768	789	205	127	8 267	1 346		9 613
AF.1	Monetary gold and SDRs							782		782
AF.2	Currency and deposits	40	1 346	139	10	38	1 573	114		1 687
AF.3	Debt securities	51	1 117	257	2	0	1 427	100		1 527
AF.4	Loans	918	0	337	180	49	1 484	52		1 536
AF.5	Equity and investment fund shares/units	2 087	804	6	0	0	2 897	218		3 115
AF.6	Insurance, pension and standardised guarantee schemes	12	483	19	1	5	520	25		545
AF.7	Financial derivatives and employee stock options	7	18	0	0	0	25	10		35
AF.8	Other accounts receivable/payable	263	0	31	12	35	341	45		386
B.90	Net worth	149	–28	444	4 804	219	5 590	–475		5 115

Rest of the world accounts (V)

8.65 The rest of the world accounts record transactions between resident and non-resident units. The rest of the world does not constitute an institutional sector as such, but in the structure of the system it plays a similar role.

8.66 The sequence of rest of the world accounts follows the same general pattern as the institutional sector accounts, i.e.:

(a) current accounts,

(b) accumulation accounts,

(c) balance sheets.

8.67 The accounts listed in points (a) to (c) of paragraph 8.66 are drawn up from the point of view of the rest of the world. Thus, what is a resource for the rest of the world is a use for the total economy and vice versa. By the same token, a financial asset held by the rest of the world is a liability for the total economy and vice versa). An exception is gold bullion held as reserve assets, which despite having no counterpart liability, are recorded in the financial account because of their role in international payments.

Current accounts

External account of goods and services (V.I)

8.68 Imports of goods and services are recorded on the resources side of the account and exports of goods and services on the uses side. The difference between resources and uses is the balancing item in the account, called 'external balance of goods and services'. If it is positive, there is a surplus for the rest of the world and a deficit for the total economy and vice versa if it is negative.

8.69 Imports and exports are both valued at the customs frontier of the exporting country. For exports, the values will be collected at prices which are 'free on board' (FOB). The import values will be collected at prices including 'carriage, insurance and freight' (CIF) incurred between the country of origin and the importing country i.e. on a CIF basis. In order to reduce the import value to a free on board basis reflecting the value at the frontier of the country of origin, the CIF element must be subtracted from the goods value measured at the point of entry of the importing country. This CIF element is then allocated to the appropriate service activities, either as imports in the case of non-resident units, and domestic output in the case of resident units providing these services.

When transport and insurance services included in the FOB value of imports of goods (i.e. between the factory and the border of the country of export) are provided by resident units, they must be included in the value of exports of services by the economy importing the goods. Conversely, when transport and insurance services included in the FOB value of exports of goods are provided by non-resident units they must be included in the value of imports of services by the economy exporting the goods.

External account of primary incomes and current transfers (V.II)

8.70 The purpose of the external account of primary incomes and current transfers is to determine the current external balance, which, in the structure of the system, corresponds to saving by the institutional sectors. This account is a condensed version of the sequence, for an institutional sector, extending from the allocation of primary income account to the use of income account.

8.71 On the resources side, the external account of primary incomes and current transfers shows the external balance of goods and services. It also records, on the resources or uses side, all distributive transactions which may involve the rest of the world, apart from capital transfers.

External accumulation accounts (V.III)

Capital account (V.III.1)

8.72 The rest of the world capital account records acquisitions less disposals of non-produced assets by non-resident units and measures the changes in net worth due to current external balance and capital transfers.

8.73 The balancing item of the capital account is the net lending or borrowing of the rest of the world. It is equal, but has the opposite sign, to the sum of the net lending or borrowing of the resident institutional sectors.

Financial account (V.III.2)

8.74 The layout of the rest of the world financial account is identical to that of the institutional sectors' financial account.

Other changes in assets account (V.III.3)

8.75 As for the institutional sectors, the changes in net worth due to other changes in volume of assets and due to nominal holding gains and losses are determined successively, holding gains and losses themselves being broken down into neutral and real holding gains and losses.

8.76 The absence of produced assets in the accumulation accounts and balance sheets of the rest of the world is due to the convention whereby a notional institutional unit is created, the rest of the world being deemed to have acquired a financial asset — and vice versa for assets held in other economies by resident units.

Balance sheets (V.IV)

8.77 The balance sheets of the rest of the world contain financial assets and liabilities. On the assets side, they also record the total acquisitions less disposals between non-resident and resident units of monetary gold and SDRs.

Table 8.16 — Full sequence of accounts for the rest of the world (external transactions account)

V.I: external account of goods and services					
	Uses			Resources	
P.6	Exports of goods and services	540	P.7	Imports of goods and services	499
P.61	Exports of goods	462	P.71	Imports of goods	392
P.62	Exports of services	78	P.72	Imports of services	107
B.11	External balance of goods and services	–41			

Table 8.16 — Full sequence of accounts for the rest of the world (external transactions account) (continued)

V.II: external account of primary incomes and current transfers					
	Uses			Resources	
D.1	Compensation of employees	6	B.11	External balance of goods and services	–41
D.11	Wages and salaries	6			
			D.1	Compensation of employees	2
D.2	Taxes on production and imports	0	D.11	Wages and salaries	2
D.21	Taxes on products	0	D.12	Employers' social contributions	0
D.211	Value added type taxes (VAT)	0	D.121	Employers' actual social contributions	0
D.212	Taxes and duties on imports excl. VAT	0	D.122	Employers' imputed social contributions	0
D.2121	Import duties	0			
D.2122	Taxes on imports excluding VAT and duties	0	D.2	Taxes on production and imports	
D.214	Taxes on products except VAT and import taxes		D.21	Taxes on products	0
D.29	Other taxes on production	0	D.211	Value added type taxes (VAT)	0
			D.212	Taxes and duties on imports excluding VAT	0
D.3	Subsidies	0	D.2121	Import duties	0

V.II: external account of primary incomes and current transfers					
Uses			Resources		
D.31	Subsidies on products	0	D.2122	Taxes on imports excluding VAT and duties	0
D.311	Import subsidies	0	D.214	Taxes on products except VAT and import taxes	0
D.319	Other subsidies on products	0			
D.39	Other subsidies on production	0	D.29	Other taxes on production	0
D.4	Property income	44	D.3	Subsidies	0
D.41	Interest	13	D.31	Subsidies on products	0
D.42	Distributed income of corporations	17	D.311	Import subsidies	0
D.421	Dividends	13	D.319	Other subsidies on products	0
D.422	Withdrawals from income of quasi-corporations	4	D.39	Other subsidies on production	0
D.43	Reinvested earnings on foreign direct investment	14			
D.44	Other investment income	0	D.4	Property income	38
			D.41	Interest	21
	Current transfers	17	D.42	Distributed income of corporations	17
D.5	Current taxes on income, wealth, etc.	1	D.421	Dividends	14
D.51	Taxes on income	1	D.422	Withdrawals from income of quasi-corporations	3
D.59	Other current taxes	0	D.43	Reinvested earnings on foreign direct investment	0
D.61	Net social contributions	0	D.44	Other investment income	0
D.611	Employers' actual social contributions	0			
D.6111	Employers' actual pension contributions	0		Current transfers	55
D.6112	Employers' actual non-pension contributions	0	D.5	Current taxes on income, wealth, etc.	0
D.612	Employers' imputed social contributions	0	D.51	Taxes on income	0
D.6121	Employers' imputed pension contributions	0	D.59	Other current taxes	
D.6122	Employers' imputed non-pension contributions	0	D.61	Net social contributions	0
D.613	Households' actual social contributions	0	D.611	Employers' actual social contributions	0
D.6131	Households' actual pension contributions	0	D.6111	Employers' actual pension contributions	0
D.6132	Households' actual non-pension contributions	0	D.6112	Employers' actual non-pension contributions	0
D.614	Households' social contribution supplements	0	D.612	Employers' imputed social contributions	0
D.6141	Households' pension contribution supplements	0	D.6121	Employers' imputed pension contributions	0
D.6142	Households' non-pension contribution supplements	0	D.6122	Employers' imputed non-pension contributions	0
D.61SC	Social insurance scheme service charges	0	D.613	Households' actual social contributions	0

V.II: external account of primary incomes and current transfers					
Uses			Resources		
D.62	Social benefits other than social transfers in kind	0	D.6131	Households' actual pension contributions	0
D.621	Social security benefits in cash	0	D.6132	Households' actual non-pension contributions	0
D.6211	Social security pension benefits in cash	0	D.614	Households' social contribution supplements	0
D.6212	Social security non-pension benefits cash	0	D.6141	Households' pension contribution supplements	0
D.622	Other social insurance benefits	0	D.6142	Households' non-pension contribution supplements	0
D.6221	Other social insurance pension benefits	0	D.61SC	Social insurance scheme service charges	0
D.6222	Other social insurance non-pension benefits	0	D.62	Social benefits other than social transfers in kind	0
D.623	Social assistance benefits in cash		D.621	Social security benefits in cash	0
D.7	Other current transfers	16	D.6211	Social security pension benefits in cash	0
D.71	Net non-life insurance premiums	2	D.6212	Social security non-pension benefits in cash	0
D.711	Net non-life direct insurance premiums	1	D.622	Other social insurance benefits	0
D.712	Net non-life reinsurance premiums	1	D.6221	Other social insurance pension benefits	0
D.72	Non-life insurance claims	12	D.6222	Other social insurance non-pension benefits	0
D.721	Non-life direct insurance claims	0	D.623	Social assistance benefits in cash	0
D.722	Non-life reinsurance claims	12	D.7	Other current transfers	55
D.73	Current transfers within general government	0	D.71	Net non-life insurance premiums	11
D.74	Current international cooperation	1	D.711	Net non-life direct insurance premiums	0
D.75	Miscellaneous current transfers	1	D.712	Net non-life reinsurance premiums	11
D.751	Current transfers to NPISHs	0	D.72	Non-life insurance claims	3
D.752	Current transfers between households	1	D.721	Non-life direct insurance claims	3
D.759	Other miscellaneous current transfers	0	D.722	Non-life reinsurance claims	0
			D.73	Current transfers within general government	0
D.8	Adjustment for the change in pension entitlements	0	D.74	Current international cooperation	22
			D.75	Miscellaneous current transfers	10
			D.751	Current transfers to NPISHs	0
			D.752	Current transfers between households	7
			D.759	Other miscellaneous current transfers	3
			D.76	VAT- and GNI-based EU own resources	9
			D.8	Adjustment for the change in pension entitlements	0
B.12	Current external balance	–13			

Table 8.16 — Full sequence of accounts for the rest of the world (external transactions account) (continued)

V.III: accumulation accounts V.III.1: capital accounts V.III.1.1: change in net worth due to current external balance and capital transfers account					
	Changes in assets			Changes in liabilities and net worth	
			B.12	Current external balance	–13
			D.9r	Capital transfers, receivable	4
			D.91r	Capital taxes, receivable	
			D.92r	Investment grants, receivable	4
			D.99r	Other capital transfers, receivable	
			D.9p	Capital transfers, payable	–1
			D.91p	Capital taxes, payable	
			D.92p	Investment grants, payable	
			D.99p	Other capital transfers, payable	–1
B.101	Changes in net worth due to current external balance and capital transfers	–10			

V.III.1.2: acquisition of non-financial assets					
	Changes in assets			Changes in liabilities and net worth	
NP	Acquisitions less disposals of non-produced assets	0	B.101	Changes in net worth due to current external balance and capital transfers	–10
NP.1	Acquisitions less disposals of natural resources	0			
NP.2	Acquisitions less disposals of contracts, Leases and licences	0			
NP.3	Purchases less sales of goodwill and marketing assets	0			
B.9	Net lending (+)/net borrowing (–)	–10			

Table 8.16 — Full sequence of accounts for the rest of the world (external transactions account) (continued)

V.III.2: financial account					
	Changes in assets			Changes in liabilities and net worth	
F	Net acquisition of financial assets	47	F	Net acquisition of financial assets	57
F.1	Monetary gold and SDRs	1	F.1	Monetary gold and SDRs	
F.11	Monetary gold	1	F.11	Monetary gold	
F.12	SDRs	0	F.12	SDRs	0
F.2	Currency and deposits	11	F.2	Currency and deposits	–2
F.21	Currency	3	F.21	Currency	1
F.22	Transferable deposits	2	F.22	Transferable deposits	0
F.221	Inter-bank positions		F.221	Inter-bank positions	
F.229	Other transferable deposits	2	F.229	Other transferable deposits	
F.29	Other deposits	6	F.29	Other deposits	–3

V.III.2: financial account					
	Changes in assets			Changes in liabilities and net worth	
F.3	Debt securities	9	F.3	Debt securities	21
F.31	Short-term	2	F.31	Short-term	5
F.32	Long-term	7	F.32	Long-term	16
F.4	Loans	4	F.4	Loans	35
F.41	Short-term	3	F.41	Short-term	14
F.42	Long-term	1	F.42	Long-term	21
F.5	Equity and investment fund shares	12	F.5	Equity and investment fund shares	14
F.51	Equity	12	F.51	Equity	9
F.511	Listed shares	10	F.511	Listed shares	3
F.512	Unlisted shares	2	F.512	Unlisted shares	2
F.519	Other equity	0	F.519	Other equity	4
F.52	Investment fund shares/units	0	F.52	Investment fund shares/units	5
F.521	MMF shares/units	0	F.521	MMF shares/units	2
F.522	Non-MMF investment fund shares/units	0	F.522	Non-MMF investment fund shares/units	3
F.6	Insurance, pension and standardised guarantee schemes	0	F.6	Insurance, pension and standardised guarantee schemes	0
F.61	Non-life insurance technical reserves	0	F.61	Non-life insurance technical reserves	0
F.62	Life insurance and annuity entitlements	0	F.62	Life insurance and annuity entitlements	0
F.63	Pension entitlements	0	F.63	Pension entitlements	0
F.64	Claim of pension funds on pension managers	0	F.64	Claim of pension funds on pension managers	0
F.65	Entitlements to non-pension benefits	0	F.65	Entitlements to non-pension benefits	0
F.66	Provisions for calls under standardised guarantees	0	F.66	Provisions for calls under standardised guarantees	0
F.7	Financial derivatives and employee stock options	0	F.7	Financial derivatives and employee stock options	3
F.71	Financial derivatives	0	F.71	Financial derivatives	3
F.711	Options	0	F.711	Options	1
F.712	Forwards	0	F.712	Forwards	2
F.72	Employee stock options		F.72	Employee stock options	
F.8	Other accounts receivable/payable	10	F.8	Other accounts receivable/payable	–14
F.81	Trade credits and advances	8	F.81	Trade credits and advances	–1
F.89	Other accounts receivable/payable, excluding trade credits and advances	2	F.89	Other accounts receivable/payable, excluding trade credits and advances	–13

Table 8.16 — Full sequence of accounts for the rest of the world (external transactions account) (continued)

V.III.3: other changes in assets accounts V.III.3.1: other changes in volume of assets account					
Other flows					
K.1	Economic appearance of assets	0	K.1	Economic appearance of assets	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AN.21	Natural resources	0
AN.22	Contracts, leases and licences	0	AN.22	Contracts, leases and licences	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AN.23	Purchases less sales of goodwill and marketing assets	0
K.2	Economic disappearance of non-produced assets	0	K.2	Economic disappearance of non-produced assets	0
K.21	Depletion of natural resources	0	K.21	Depletion of natural resources	0
AN.21	Natural resources	0	AN.21	Natural resources	0
K.22	Other economic disappearance of non-produced assets	0	K.22	Other economic disappearance of non-produced assets	0
AN.21	Natural resources	0	AN.21	Natural resources	0
AN.22	Contracts, leases and licences	0	AN.22	Contracts, leases and licences	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AN.23	Purchases less sales of goodwill and marketing assets	0
K.3	Catastrophic losses	0	K.3	Catastrophic losses	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AF	Financial assets/liabilities	0	AF	Financial assets/liabilities	0
K.4	Uncompensated seizures	0	K.4	Uncompensated seizures	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AF	Financial assets	0	AF	Financial assets	0
K.5	Other changes in volume n.e.c.	0	K.5	Other changes in volume n.e.c.	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AF	Financial assets/liabilities	0	AF	Financial assets/liabilities	0
K.6	Changes in classification	0	K.6	Changes in classification	0
K.61	Changes in sector classification and structure	0	K.61	Changes in sector classification and structure	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AF	Financial assets/liabilities	0	AF	Financial assets/liabilities	0
K.62	Changes in classification of assets and liabilities	0	K.62	Changes in classification of assets and liabilities	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0

V.III.3: other changes in assets accounts V.III.3.1: other changes in volume of assets account					
Other flows					
AF	Financial assets/liabilities	0	AF	Financial assets/liabilities	0
	Total other changes in volume	0		Total other changes in volume	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.11	Fixed assets	0	AN.11	Fixed assets	0
AN.12	Inventories	0	AN.12	Inventories	0
AN.13	Valuables	0	AN.13	Valuables	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AN.21	Natural resources	0
AN.22	Contracts, leases and licences	0	AN.22	Contracts, leases and licences	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AN.23	Purchases less sales of goodwill and marketing assets	0
AF	Financial assets	0	AF	Financial assets	0
AF.1	Monetary gold and SDRs	0	AF.1	Monetary gold and SDRs	0
AF.2	Currency and deposits	0	AF.2	Currency and deposits	0
AF.3	Debt securities	0	AF.3	Debt securities	0
AF.4	Loans	0	AF.4	Loans	0
AF.5	Equity and investment fund shares/units	0	AF.5	Equity and investment fund shares/units	0
AF.6	Insurance, pension and standardised guarantee schemes	0	AF.6	Insurance, pension and standardised guarantee schemes	0
AF.7	Financial derivatives and employee stock options	0	AF.7	Financial derivatives and employee stock options	0
AF.8	Other accounts receivable/payable	0	AF.8	Other accounts receivable/payable	0
	Changes in net worth due to other changes in volume of assets	0		Changes in net worth due to other changes in volume of assets	0

Table 8.16 — Full sequence of accounts for the rest of the world (external transactions account) (continued)

V.III.3: other changes in assets accounts V.III.3.2: revaluation account					
	Changes in assets			Changes in liabilities and net worth	
K.7	Nominal holding gains (+)/losses (–)		K.7	Nominal holding gains (+)/losses (–)	
AN.2	Non-produced non-financial assets		AF	Financial assets/liabilities	15
AN.21	Natural resources		AF.1	Monetary gold and SDRs	12
AN.22	Contracts, leases and licences		AF.2	Currency and deposits	0
AN.23	Purchases less sales of goodwill and marketing assets		AF.3	Debt securities	2
AF	Financial assets	7	AF.4	Loans	0
AF.1	Monetary gold and SDRs	0	AF.5	Equity and investment fund shares/units	1
AF.2	Currency and deposits		AF.6	Insurance, pension and standardised guarantee schemes	0
AF.3	Debt securities	4	AF.7	Financial derivatives and employee stock options	0
AF.4	Loans	0	AF.8	Other accounts payable	0

V.III.3: other changes in assets accounts V.III.3.2: revaluation account					
	Changes in assets			Changes in liabilities and net worth	
AF.5	Equity and investment fund shares/units	3			
AF.6	Insurance, pension and standardised guarantee schemes	0			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable	0			
			B.103	Changes in net worth due to nominal holding gains/losses	4

V.III.3.2.1: neutral holding gains/losses account					
	Changes in assets			Changes in liabilities and net worth	
K.71	Neutral holding gains (+)/losses (–)		K.71	Neutral holding gains (+)/losses (–)	
AN.2	Non-produced non-financial assets		AF	Financial assets	22
AN.21	Natural resources		AF.1	Monetary gold and SDRs	16
AN.22	Contracts, leases and licences		AF.2	Currency and deposits	2
AN.23	Purchases less sales of goodwill and marketing assets		AF.3	Debt securities	2
AF	Financial assets	12	AF.4	Loans	0
AF.1	Monetary gold and SDRs		AF.5	Equity and investment fund shares/units	0
AF.2	Currency and deposits	2	AF.6	Insurance, pension and standardised guarantee schemes	1
AF.3	Debt securities	3	AF.7	Financial derivatives and employee stock options	0
AF.4	Loans	1	AF.8	Other accounts payable	1
AF.5	Equity and investment fund shares/units	2			
AF.6	Insurance, pension and standardised guarantee schemes	1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable	3			
			B.1031	Changes in net worth due to neutral holding gains/losses	6

V.III.3.2.2: real holding gains/losses account					
	Changes in assets			Changes in liabilities and net worth	
K.72	Real holding gains (+)/losses (–)		K.72	Real holding gains (+)/losses (–)	
AN.2	Non-produced non-financial assets		AF	Financial assets	–7
AN.21	Natural resources		AF.1	Monetary gold and SDRs	–4
AN.22	Contracts, leases and licences		AF.2	Currency and deposits	–2
AN.23	Purchases less sales of goodwill and marketing assets		AF.3	Debt securities	0
AF	Financial assets	–5	AF.4	Loans	0
AF.1	Monetary gold and SDRs	0	AF.5	Equity and investment fund shares/units	1

V.III.3.2.2: real holding gains/losses account					
Changes in assets			Changes in liabilities and net worth		
AF.2	Currency and deposits	–2	AF.6	Insurance, pension and standardised guarantee schemes	–1
AF.3	Debt securities	1	AF.7	Financial derivatives and employee stock options	0
AF.4	Loans	–1	AF.8	Other accounts payable	–1
AF.5	Equity and investment fund shares/units	1			
AF.6	Insurance, pension and standardised guarantee schemes	–1			
AF.7	Financial derivatives and employee stock options				
AF.8	Other accounts receivable	–3			
			B.1032	Changes in net worth due to real holding gains/losses	–2

Table 8.16 — Full sequence of accounts for the rest of the world (external transactions account) (continued)

V.IV: external assets and liabilities account V.IV.1: opening balance sheet					
Assets			Liabilities and net worth		
AN	Non-financial assets	0	AF	Financial liabilities	1 274
AN.2	Non-produced non-financial assets	0	AF.1	Monetary gold and SDRs	770
AN.21	Natural resources	0	AF.2	Currency and deposits	116
AN.22	Contracts, leases and licences	0	AF.3	Debt securities	77
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.4	Loans	17
			AF.5	Equity and investment fund shares/units	203
AF	Financial assets	805	AF.6	Insurance, pension and standardised guarantee schemes	25
AF.1	Monetary gold and SDRs		AF.7	Financial derivatives and employee stock options	7
AF.2	Currency and deposits	105	AF.8	Other accounts payable	59
AF.3	Debt securities	125			
AF.4	Loans	70			
AF.5	Equity and investment fund shares/units	345			
AF.6	Insurance, pension and standardised guarantee schemes	26			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable	134			
			B.90	Net worth	–469

V.IV.2: changes in balance sheet					
Changes in assets			Changes in liabilities and net worth		
AN	Non-financial assets		AF	Financial liabilities	72
AN.2	Non-produced non-financial assets		AF.1	Monetary gold and SDRs	12

V.IV.2: changes in balance sheet					
Changes in assets			Changes in liabilities and net worth		
AN.21	Natural resources		AF.2	Currency and deposits	–2
AN.22	Contracts, leases and licences		AF.3	Debt securities	23
AN.23	Purchases less sales of goodwill and marketing assets		AF.4	Loans	35
			AF.5	Equity and investment fund shares/units	15
AF	Financial assets	54	AF.6	Insurance, pension and standardised guarantee schemes	0
AF.1	Monetary gold and SDRs	1	AF.7	Financial derivatives and employee stock options	3
AF.2	Currency and deposits	11	AF.8	Other accounts payable	–14
AF.3	Debt securities	13			
AF.4	Loans	4			
AF.5	Equity and investment fund shares/units	15			
AF.6	Insurance, pension and standardised guarantee schemes	0			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable	10			
			B.10	Changes in net worth Due to:	–6
			B.101	Current external balance and capital transfers	–10
			B.102	Other changes in volume of assets	0
			B.103	Nominal holding gains/losses	4
			B.1031	Neutral holding gains/losses	6
			B.1032	Real holding gains/losses	–2

V.IV.3: closing balance sheet					
Assets			Liabilities and net worth		
AN	Non-financial assets		AF	Financial liabilities	1 346
AN.2	Non-produced non-financial assets		AF.1	Monetary gold and SDRs	782
AN.21	Natural resources		AF.2	Currency and deposits	114
AN.22	Contracts, leases and licences		AF.3	Debt securities	100
AN.23	Purchases less sales of goodwill and marketing assets		AF.4	Loans	52
			AF.5	Equity and investment fund shares/units	218
AF	Financial assets	859	AF.6	Insurance, pension and standardised guarantee schemes	25
AF.1	Monetary gold and SDRs	1	AF.7	Financial derivatives and employee stock options	10
AF.2	Currency and deposits	116	AF.8	Other accounts payable	45
AF.3	Debt securities	138			
AF.4	Loans	74			
AF.5	Equity and investment fund shares	360			

V.IV.3: closing balance sheet					
Assets			Liabilities and net worth		
AF.6	Insurance, pension and standardised guarantee schemes	26			
AF.7	Financial derivatives and employee stock options				
AF.8	Other accounts receivable	144			
			B.90	Net worth	–475

Goods and services account (0)

8.78 The purpose of the goods and services account is to show, by product group and for the total economy, the supply of products and their uses. The account is not part of the sequence of accounts, but rather an underpinning identity between the supply and use of products in the economy. It represents at aggregate level the matching of supply and use of products in the rows of the supply and use tables.

8.79 It therefore shows, by product group and for the total economy, the resources (output and imports) and the uses of goods and services (intermediate consumption, final consumption, gross fixed capital formation, changes in inventories, acquisitions less disposals of valuables, and exports).

8.80 Given the way in which output is valued at basic prices and uses at purchasers' prices, taxes (less subsidies) on products must be included in the resources section.

8.81 Uses are recorded on the right-hand side of the goods and services account and resources on the left, i.e. on the opposite side from that used in the current accounts for the institutional sectors, since the product flows are the counterparts of the monetary flows.

8.82 The goods and services account is by definition in balance and, therefore, has no balancing item.

Table 8.17 — Account 0: goods and services account

Resources			Uses		
P.1	Output	3 604	P.2	Intermediate consumption	1 883
P.11	Market output	3 077	P.3	Final consumption expenditure	1 399
P.12	Output for own final use	147	P.31	Individual consumption expenditure	1 230
P.13	Non-market output	380	P.32	Collective consumption expenditure	169
D.21	Taxes on products	141	P.5g	Gross capital formation	414
D.31	Subsidies on products	–8	P.511	Acquisitions less disposals of fixed assets	359
P.7	Imports of goods and services	499	P.5111	Acquisitions of new fixed assets	358
P.71	Imports of goods	392	P.5112	Acquisition of existing fixed assets	9
P.72	Imports of services	107	P.5113	Disposals of existing fixed assets	–8
			P.512	Costs of ownership transfer on non-produced assets	17
			P.52	Change in inventories	28
			P.53	Acquisitions less disposals of valuables	10
			P.6	Exports of goods and services	540
			P.61	Exports of goods	462
			P.62	Exports of services	78

Integrated economic accounts

8.83 The integrated economic accounts give a concise overview of the accounts of an economy, namely the current accounts, accumulation accounts and balance sheets.

They bring together in the same table the accounts of all the institutional sectors, the total economy and the rest of the world, and balance all the flows and all the assets and liabilities. They also enable the aggregates to be read off directly.

8.84 In the table of integrated economic accounts, uses, assets and changes in assets are recorded on the left-hand side, while resources, liabilities, changes in liabilities and net worth are recorded on the right-hand side.

8.85 To make the table readable while giving a picture of the whole economic process, the levels of aggregation used are the highest compatible with an understanding of the structure of the system.

8.86 The columns in the table represent the institutional sectors, namely: non-financial corporations, financial corporations, general government, non-profit institutions serving households, and households. There are also a column for the total economy, a column for the rest of the world, and a column which balances uses and resources of goods and services.

8.87 The rows in the table represent the various categories of transactions, assets and liabilities, balancing items and certain aggregates

Table 8.18 — Integrated economic accounts

Current accounts											
				Uses							
				S.1	S.15	S.14	S.13	S.12	S.11		
Accounts	Total	Goods and service (res)	RoW	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and other flows stocks and balancing items
I. Production/ external account of goods and services	499	499								P.7	Imports of goods and services
	540		540							P.6	Exports of goods and services
	3 604	3 604								P.1	Output
	1 883			1 883	17	115	222	52	1 477	P.2	Intermediate consumption
	133	133								D.21-D.31	Taxes less subsidies on products
	1 854			1 854	15	155	126	94	1 331	B.1g/B.1*g	Value added, gross/gross domestic product
	222			222	3	23	27	12	157	P.51c	Consumption of fixed capital
	1 632			1 632	12	132	99	82	1 174	B.1n/B.1*n	Value added, net/net domestic product
	–41		–41							B.11	External balance of goods and services
II.1.1. Generation of income account	1 150			1 150	11	11	98	44	986	D.1	Compensation of employees
	191		0	191						D.2-D.3	Taxes less subsidies on production and imports
	133		0	133						D.21-D.31	Taxes less subsidies on products
	58		0	58	1	–1	1	4	53	D.29-D.39	Other taxes less subsidies on production
	452			452	3	84	27	46	292	B.2g	Operating surplus, gross
	61			61		61				B.3g	Mixed income, gross
	238			238	0	69	0	34	135	B.2n	Operating surplus, net
	53			53		53				B.3n	Mixed income, net
II.1.2 Allocation of primary income account	435		44	391	6	41	42	168	134	D.4	Property income
	1 864			1 864	4	1 381	198	27	254	B.5g/B.5*g	Balance of primary incomes, gross/ national income, gross
	1 642			1 642	1	1 358	171	15	97	B.5n/B.5*n	Balance of primary incomes, net/ national income, net

Current accounts											
Uses											
				S.1	S.15	S.14	S.13	S.12	S.11		
Accounts	Total	Goods and service (res)	RoW	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and other flows stocks and balancing items
II.2 Secondary distribution of income account	213		1	212	0	178	0	10	24	D.5	Current taxes on income, wealth etc.
	333		0	333		333				D.61	Net social contributions
	384		0	384	5	0	112	205	62	D.62	Social benefits other than transfers in kind
	299		16	283	2	71	136	62	12	D.7	Other current transfers
	1 826			1 826	37	1 219	317	25	228	B.6g	Disposable income, gross
	1 604			1 604	34	1 196	290	13	71	B.6n	Disposable income, net
II.3 Redistribution of income in kind account	215			215	31		184			D.63	Social transfers in kind
	1 826			1 826	6	1 434	133	25	228	B.7g	Adjusted disposable income, gross
	1 604			1 604	3	1 411	106	13	71	B.7n	Adjusted disposable income, net
II.4 Use of income account										B.6g	Disposable income, gross
										B.6n	Disposable income, net
	1 399			1 399	1	1 230	168			P.4	Actual final consumption
	1 399			1 399	32	1 015	352			P.3	Final consumption expenditure
	11		0	11	0		0	11	0	D.8	Adjustment for the change in pension entitlements
	427			427	5	215	–35	14	228	B.8g	Saving, gross
	205			205	2	192	–62	2	71	B.8n	Saving, net
	–13		–13							B.12	Current external balance

Resources											
		S.11	S.12	S.13	S.14	S.15	S.1				
	Transactions and other flows stocks and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	RoW	Goods and service (uses)	Total	Accounts
P.7	Imports of goods and services							499		499	I. Production/ external account of goods and services
P.6	Exports of goods and services								540	540	
P.1	Output	2 808	146	348	270	32	3 604			3 604	
P.2	Intermediate consumption								1 883	1 883	
D.21-D.31	Taxes less subsidies on products						133			133	

		Resources									
		S.11	S.12	S.13	S.14	S.15	S.1				
	Transactions and other flows stocks and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	RoW	Goods and service (uses)	Total	Accounts
B.1g/B.1*g	Value added, gross/gross domestic product	1 331	94	126	155	15	1 854			1 854	
P.51c	Consumption of fixed capital	157	12	27	23	3	222			222	
B.1n/B.1*n	Value added, net/net domestic product	1 174	82	99	132	12	1 632			1 632	
B.11	External balance of goods and services							−41		−41	
D.1	Compensation of employees				1 154		1 154	2		1 156	II.1.1. Generation of income account
D.2-D.3	Taxes less subsidies on production and imports			191			191	0		191	
D.21-D.31	Taxes less subsidies on products			133			133	0		133	II.1.2 Allocation of primary income account
D.29-D.39	Other taxes less subsidies on production			58			58	0		58	
B.2g	Operating surplus, gross	292	46	27	84	3	452			452	
B.3g	Mixed income, gross				61		61			61	
B.2n	Operating surplus, net	135	34	0	69	0	238			238	
B.3n	Mixed income, net				53		53			53	
D.4	Property income	96	149	22	123	7	397	38		435	
B.5g	Balance of primary incomes, gross/national income, gross	254	27	198	1 381	4	1 864			1 864	
B.5n/B.5*n	Balance of primary incomes, net/national income, net	97	15	171	1 358	1	1 642			1 642	
D.5	Current taxes on income, wealth etc.			213			213	0		213	II.2 Secondary distribution of income account
D.61	Net social contributions	66	213	50	0	4	333	0		333	
D.62	Social benefits other than social transfers in kind				384		384	0		384	
D.7	Other current transfers	6	62	104	36	36	244	55		299	
B.6g	Disposable income, gross	228	25	317	1 219	37	1 826			1 826	II.3 Redistribution of income in kind account
B.6n	Disposable income, net	71	13	290	1 196	34	1 604			1 604	
D.63	Social transfers in kind				215		215			215	

	Resources									
		S.11	S.12	S.13	S.14	S.15	S.1				
	Transactions and other flows stocks and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	RoW	Goods and service (uses)	Total	Accounts
B.7g	Adjusted disposable income, gross	228	25	133	1 434	6	1 826			1 826	
B.7n	Adjusted disposable income, net	71	13	106	1 411	3	1 604			1 604	
B.6g	Disposable income, gross	228	25	317	1 219	37	1 826			1 826	
B.6n	Disposable income, net	71	13	290	1 196	34	1 604			1 604	
P.4	Actual final consumption								1 399	1 399	II.4 Use of income account
P.3	Final consumption expenditure								1 399	1 399	
D.8	Adjustment for the change in pension entitlements				11		11	0		11	
B.8g	Saving, gross										
B.8n	Saving, net										
B.12	Current external balance										

Table 8.18 — Integrated economic accounts

Accumulation accounts											
Changes in assets											
				S.1	S.15	S.14	S.13	S.12	S.11		
Accounts	Total	Goods and service (res)	RoW	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and other flows stocks and balancing items
III.1.1 Change in net worth due to saving and capital transfers account										B.8n	Saving, net
										B.12	Current external balance
										D.9r	Capital transfers, receivable
										D.9p	Capital transfers, payable (–)
	192		–29	221	20	236	–81	–16	62	B.101	Changes in net worth due to saving and capital transfers
III.1.2 Acquisition of non-financial assets account	414			414	5	55	38	8	308	P.5g	Gross capital formation
	–222			–222	–3	–23	–27	–12	–157	P.51c	Consumption of fixed capital (–)
	28			28	0	2	0	0	26	P.52	Changes in inventories
	10			10	0	5	3	0	2	P.53	Acquisitions less disposals of valuables
	0		0	0	1	4	2	0	–7	NP	Acquisitions less disposals of non-produced assets
	0		–10	10	–4	174	–103	–1	–56	B.9	Net lending (+)/net borrowing(–)

Accumulation accounts											
Changes in assets											
				S.1	S.15	S.14	S.13	S.12	S.11		
Accounts	Total	Goods and service (res)	RoW	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and other flows stocks and balancing items
III.2 Financial account	483		47	436	2	189	−10	172	83	F	Net acquisition of financial assets\
	0		1	−1			0	−1		F.1	Monetary gold and SDRs
	100		11	89	2	64	−26	10	39	F.2	Currency and deposits
	95		9	86	−1	10	4	66	7	F.3	Debt securities
	82		4	78	0	3	3	53	19	F.4	Loans
	119		12	107	0	66	3	28	10	F.5	Equity and investment fund shares
	48		0	48	0	39	1	7	1	F.6	Insurance, pension and standardised guarantee schemes
	14		0	14	0	3	0	8	3	F.7	Financial derivatives and employee stock options
	25		10	15	1	4	5	1	4	F.8	Other accounts receivable/ payable
III.3.1 Other changes in volume of assets account	33			33	0	0	7	0	26	K.1	Economic appearance of assets
	−11			−11	0	0	−2		−9	K.2	Economic disappearance of non-produced assets
	−11			−11	0	0	−6	0	−5	K.3	Catastrophic losses
	0			0	0	0	5	0	−5	K.4	Uncompensated seizures
	2			2	0	2	0	1	1	K.5	Other changes in volume n.e.c.
	0			0	0	0	−4	−2	6	K.6	Changes in classification
	13			13	0	0	0	−1	14		Other volume changes, total
											Of which
	−7			−7	0	0	−3	−2	−2	AN.1	Produced non-financial assets
	17			17	0	0	3	0	14	AN.2	Non-produced non-financial assets
	3			3	0	0	0	1	2	AF	Financial assets/liabilities
										B.102	Changes in net worth due to other changes in volume of assets

Accumulation accounts											
Changes in assets											
				S.1	S.15	S.14	S.13	S.12	S.11		
Accounts	Total	Goods and service (res)	RoW	Total economy	NPISHs	Households	General government	Financial corporations	Non-financial corporations		Transactions and other flows stocks and balancing items
III.3.2 Revaluation account										K.7	Nominal holding gains/losses
	280			280	8	80	44	4	144	AN	Non-financial assets
	126			126	5	35	21	2	63	AN.1	Produced non-financial assets
	154		0	154	3	45	23	2	81	AN.2	Non-produced non-financial assets
	91		7	84	2	16	1	57	8	AF	Financial assets/liabilities
										B.103	Changes in net worth due to nominal holding gains (+)/losses (–)

Changes in liabilities and net worth											
		S.11	S.12	S.13	S.14	S.15	S.1				
	Transactions and other flows stocks and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	RoW	Goods and service (uses)	Total	Accounts
B.8n	Saving, net	71	2	–62	192	2	205			205	II.1.1 Change in net worth due to saving and capital transfers account
B.12	Current external balance							–13		–13	
D.9r	Capital transfers, receivable	33	0	6	23	0	62	4		66	
D.9p	Capital transfers, payable (–)	–16	–7	–34	–5	–3	–65	–1		–66	
B.101	Changes in net worth due to saving and capital transfers	88	–5	–90	210	–1	202	–10		192	
P.5g	Gross capital formation								414	414	II.1.2 Acquisition of non-financial assets account
P.51c	Consumption of fixed capital (–)								–222		
P.52	Changes in inventories								28	28	
P.53	Acquisitions less disposals of valuables								10	10	
NP	Acquisitions less disposals of non-produced assets								0		

	Changes in liabilities and net worth										
		S.11	S.12	S.13	S.14	S.15	S.1				
	Transactions and other flows stocks and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	RoW	Goods and service (uses)	Total	Accounts
B.9	Net lending (+)/net borrowing(–)	–56	–1	–103	174	–4	10	–10		0	
F	Net incurrence of liabilities	139	173	93	15	6	426	57		483	
F.1	Monetary gold and SDRs										
F.2	Currency and deposits		65	37			102	–2		100	
F.3	Debt securities	6	30	38	0	0	74	21		95	
F.4	Loans	21	0	9	11	6	47	35		82	III.2 Financial account
F.5	Equity and investment fund shares	83	22				105	14		119	
F.6	Insurance, pension and standardised guarantee schemes		48	0			48	0		48	
F.7	Financial derivatives and employee stock options	3	8	0	0	0	11	3		14	
F.8	Other accounts receivable/payable	26		9	4		39	–14		25	
K.1	Economic appearance of assets										
K.2	Economic disappearance of non-produced assets										
K.3	Catastrophic losses										
K.4	Uncompensated seizures										
K.5	Other changes in volume n.e.c.	0	0	0	1	0	1			1	
K.6	Changes in classification	0	0	2	0	0	2			2	II.3.1 Other changes in volume of assets account
	Total other volume changes	0	0	2	1	0	3			3	
	Of which										
AN.1	Produced non-financial assets										
AN.2	Non-produced non-financial assets										
AF	Financial assets/liabilities	0	0	2	1	0	3			3	
B.102	Changes in net worth due to other changes in volume of assets	14	–1	–2	–1	0	10			10	
K.7	Nominal holding gains/losses										
AN	Non-financial assets										
AN.1	Produced non-financial assets										II.3.2 Revaluation account
AN.2	Non-produced non-financial assets										
AF	Financial assets/liabilities	18	51	7	0	0	76	15		91	
B.103	Changes in net worth due to nominal holding gains (+)/losses (–)	134	10	38	96	10	288	4		292	

Table 8.18 — Integrated economic accounts

Accounts	Total	Goods and service (res.)	RoW	S.1 Total economy	S.15 NPISHs	S.14 Households	S.13 General government	S.12 Financial corporations	S.11 Non-financial corporations		Transactions and other flows stocks and balancing items
Balance sheets — Assets											
IV.1 Opening balance sheet	4 621			4 621	159	1 429	789	93	2 151	AN	Non-financial assets
	2 818			2 818	124	856	497	67	1 274	AN.1	Produced non-financial assets
	1 803			1 803	35	573	292	26	877	AN.2	Non-produced non-financial assets
	9 036		805	8 231	172	3 260	396	3 421	982	AF	Financial assets/liabilities
										B.90	Net worth
IV.2 Changes in balance sheet											Total changes in assets
	480			480	11	115	57	−4	301	AN	Non-financial assets
	294			294	7	67	29	−4	195	AN.1	Produced non-financial assets
	186			186	4	48	28	0	106	AN.2	Non-produced non-financial assets
	577		54	523	4	205	−9	230	93	AF	Financial assets/liabilities
										B.10	Changes in net worth, total
										B.101	Saving and capital transfers
										B.102	Other changes in volume of assets
										B.103	Nominal holding gains (+)/losses(–)
IV.3 Closing balance sheet	5 101			5 101	170	1 544	846	89	2 452	AN	Non-financial assets
	3 112			3 112	131	923	526	63	1 469	AN.1	Produced non-financial assets
	1 989			1 989	39	621	320	26	983	AN.2	Non-produced non-financial assets
	9 613		859	8 754	176	3 465	387	3 651	1 075	AF	Financial assets/liabilities
										B.90	Net worth

Liabilities and net worth											
		S.11	S.12	S.13	S.14	S.15	S.1				
	Transactions and other flows stocks and balancing items	Non-financial corporations	Financial corporations	General government	Households	NPISHs	Total economy	RoW	Goods and service (uses)	Total	Accounts
AN	Non-financial assets										IV.1 Opening balance sheet
AN.1	Produced non-financial assets										
AN.2	Non-produced non-financial assets										
AF	Financial assets/liabilities	3 221	3 544	687	189	121	7 762	1 274		9 036	
B.90	Net worth	–88	–30	498	4 500	210	5 090	–469		4 621	
	Total changes in assets										IV.2 Changes in balance sheet
AN	Non-financial assets										
AN.1	Produced non-financial assets										
AN.2	Non-produced non-financial assets										
AF	Financial assets/liabilities	157	224	102	16	6	505	72		577	
B.10	Changes in net worth, total	237	4	–54	304	9	500	–6		494	
B.101	Saving and capital transfers	88	–5	–90	210	–1	202	–10		192	
B.102	Other changes in volume of assets	14	–1	–2	–1	0	10			10	
B.103	Nominal holding gains (+)/losses(–)	134	10	38	96	10	288	4		292	
AN	Non-financial assets										IV.3 Closing balance sheet
AN.1	Produced non-financial assets										
AN.2	Non-produced non-financial assets										
AF	Financial assets/liabilities	3 378	3 768	789	205	127	8 267	1 346		9 613	
B.90	Net worth	149	–26	444	4 804	219	5 590	–475		5 115	

Aggregates

8.88 The aggregates are summary indicators of the result of the activity of the total economy and key magnitudes for purposes of macroeconomic analysis and comparisons over time and space.

Gross domestic product at market prices (GDP)

8.89 Gross domestic product at market prices is the final result of the production activity of resident producer units. It can be defined in three ways:

(a) production approach: GDP is the sum of gross value added of the various institutional sectors or the various industries plus taxes and less subsidies on products (which are not allocated to sectors and industries). It is also the balancing item in the total economy production account;

(b) expenditure approach: GDP is the sum of final uses of goods and services by resident institutional units (final consumption and gross capital formation), plus exports and minus imports of goods and services;

(c) income approach: GDP is the sum of uses in the total economy generation of income account (compensation of employees, taxes on production and imports less subsidies, gross operating surplus and mixed income of the total economy).

8.90 By deducting consumption of fixed capital from GDP, we obtain net domestic product at market prices (NDP).

Operating surplus of the total economy

8.91 The gross (or net) operating surplus of the total economy is the sum of the gross (or net) operating surpluses of the various industries or the various institutional sectors.

Mixed income of the total economy

8.92 The gross (or net) mixed income of the total economy is identical to the gross (or net) mixed income of the households sector.

Entrepreneurial income of the total economy

8.93 The gross (or net) entrepreneurial income of the total economy is the sum of the gross (or net) entrepreneurial incomes of the various sectors.

National income (at market prices)

8.94 Gross (or net) national income (at market prices) represents total primary income receivable by resident institutional units: compensation of employees, taxes on production and imports less subsidies, property income (receivable less payable), (gross or net) operating surplus and (gross or net) mixed income.

Gross national income (at market prices) equals GDP minus primary income payable by resident institutional units to non-resident institutional units plus primary income receivable by resident institutional units from the rest of the world.

National income is not a production concept but an income concept, which is more significant if expressed in net terms, i.e. after deduction of the consumption of fixed capital.

National disposable income

8.95 Gross (or net) national disposable income is the sum of the gross (or net) disposable incomes of the institutional sectors. Gross (or net) national disposable income equals gross (or net) national income (at market prices) minus current transfers (current taxes on income, wealth etc., social contributions, social benefits and other current transfers) payable to non-resident units, plus current transfers receivable by resident units from the rest of the world.

Saving

8.96 This aggregate measures the portion of national disposable income that is not used for final consumption expenditure. Gross (or net) national saving is the sum of the gross (or net) savings of the various institutional sectors.

Current external balance

8.97 The balancing item in the external account of primary income and current transfers represents the surplus (if it is negative) or the deficit (if it is positive) of the total economy on its current transactions (trade in goods and services, primary incomes, current transfers) with the rest of the world

Net lending (+) or borrowing (–) of the total economy

8.98 The net lending (+) or borrowing (–) of the total economy is the sum of the net lending or borrowing of the institutional sectors. It represents the net resources that the total economy makes available to the rest of the world (if it is positive) or receives from the rest of the world (if it is negative). The net lending (+) or borrowing (–) of the total economy is equal but of opposite sign to the net borrowing (–) or lending (+) of the rest of the world.

Net worth of the total economy

8.99 The net worth of the total economy is the sum of the net worth of the institutional sectors. It represents the value of the non-financial assets of the total economy minus the balance of financial assets and liabilities of the rest of the world.

General government expenditure and revenue

General government expenditure and revenue are defined by reference to a list of the ESA categories.

8.100 Government expenditure comprises the following ESA categories, recorded under the use side of general government accounts, with the exception of D.3 which is recorded under the resource side of general government accounts:

P.2	Intermediate consumption
P.5	Gross capital formation
D.1	Compensation of employees
D.29	Other taxes on production, payable
D.3	Subsidies, payable
D.4	Property income, payable
D.5	Current taxes on income, wealth, etc.
D.62	Social benefits other than social transfers in kind
D.632	Social transfers in kind - purchased market production
D.7	Other current transfers
D.8	Adjustment for the change in pension entitlements
D.9p	Capital transfers, payable
NP	Acquisitions less disposals of non-produced assets

Government revenue comprises the following ESA categories, recorded under the resource side of general government accounts, with the exception of D.39 which is recorded under the use side of general government accounts:

P.11	Market output
P.12	Output for own final use
P.131	Payments for non-market output
D.2	Taxes on production and imports, receivable
D.39	Other subsidies on production, receivable
D.4	Property income, receivable
D.5	Current taxes on income, wealth, etc.
D.61	Net social contributions
D.7	Other current transfers
D.9r	Capital transfers, receivable

By definition, the difference between general government revenue and general government expenditure is net lending (+)/net borrowing (–) of the general government sector.

The transactions D.41 (interest), D.73 (current transfers within general government), D.92 (investment grants) and D.99 (other capital transfers) are consolidated. The other transactions are not consolidated.

CHAPTER 9

Supply and use tables and the input-output framework

Introduction

9.01 The purpose of this Chapter is to provide an overview of supply and use tables and of the input-output framework.

9.02 The core of the input-output framework is the supply and use tables in current prices and prices of the previous year. The framework is completed by the symmetric input-output tables which are derived from the supply and use tables by using assumptions or additional data.

The supply and use and symmetric input-output tables can be extended and modified for specific purposes such as productivity accounts, labour accounts, quarterly accounts, regional accounts and environmental accounts in monetary or physical terms.

9.03 Supply and use tables are matrices describing the values of transactions in products for the national economy categorised by product type and industry. These tables show:

(a) the structure of the costs of production, and the income generated in the production process;

(b) the flows of goods and services produced within the national economy;

(c) the flows of goods and services between the domestic economy and the rest of the world; for analysis in a European context, a distinction is required between intra-EU flows and flows with countries outside the EU.

9.04 A supply table shows the supply of goods and services by product and by producing industry, and distinguishes supply amongst domestic industries and imports. A schematic outline of a supply table is given in Table 9.1.

Table 9.1 — Schematic outline of a supply table

Supplies	Producing industries	Rest of the world	Totals
Products	Output values	Import values	Total supply by product
Totals	Total industry output	Total imports	Total supply

9.05 A use table shows the use of goods and services categorised by product and by type of use. The uses shown in the columns are as follows:

(a) intermediate consumption by industry;

(b) final consumption expenditure: households, government and NPISH;

(c) gross capital formation; and

(d) exports.

In the columns under the intermediate consumption by industry, the table shows the components of gross value-added, as follows:

(a) compensation of employees;

(b) other taxes less subsidies on production;

(c) net mixed income, net operating surplus and consumption of fixed capital.

A schematic outline of a use table is given in Table 9.2 below.

Table 9.2 — Schematic outline of a use table

Uses	Industries	Final consumption	Gross capital formation	Rest of the world	Total
Products					
Total	Intermediate consumption	Final consumption	Gross capital formation	Exports	Total use
Components of value added	Compensation of employees Other taxes less subsidies Net operating surplus Consumption of fixed capital				

9.06 In the supply and use tables the following identities apply:

(a) for each industry, output equals intermediate consumption plus gross value added;

(b) for each product, supply equals the sum of all uses, shown in balanced rows in the supply and use framework.

This identity is valid only when supply and use are on the same valuation basis, i.e. both at purchasers' prices or both at basic prices (see paragraphs 9.30 to 9.33).

Accordingly, for each product:

supply at purchasers' prices is equal to

output of the product at basic prices

plus imports at basic prices

plus trade and transport margins

plus taxes *less* subsidies on products

which is equal to use of the product at purchasers' prices, which is equal to

intermediate demand for the product

plus final consumption expenditure

plus gross capital formation

plus exports.

At the level of the total economy, total intermediate demand is equal to total intermediate consumption, trade and transport margins sum to zero over the whole economy as they are matched by the output of the margin industries, and so this identity can be stated as:

output + imports + taxes on products less subsidies on products = Intermediate consumption + final consumption +gross capital formation + exports

therefore

output − intermediate consumption + taxes on products less subsidies on products

= final consumption + gross capital formation + exports less imports

which shows the equivalence of the production and expenditure approaches to measuring GDP;

(c) gross value-added as the difference between output and intermediate consumption by industry. It is identical to the sum of the incomes generated. So gross value-added equals the sum of compensation of employees, consumption of fixed capital, net operating surplus/mixed income, and other taxes less subsidies on production. This enables the consistency of the income approach to measuring GDP to be checked with the production approach.

9.07 Supply and use tables are the central framework for industry analyses, such as analysis of output, value added, compensation of employees, employment, operating surplus/mixed income, taxes (less subsidies) on production, gross fixed capital formation, consumption of fixed capital and capital stock.

9.08 The supply and use tables contain the flows in the following accounts:

(a) the goods and services account;

(b) the production account;

(c) the generation of income account.

These accounts show the generation of income and the supply and use of goods and services by institutional sector. The supply and use tables can complement this information by showing a breakdown by industry and by showing volume and price changes. The information by institutional sector in the sector accounts and the information by industry in the supply and use tables can be linked by a cross-classification table such as that given in Table 9.3 below.

Table 9.3 — Table linking supply and use tables to sector accounts

		Industries (NACE)	Total
Sector			
S.11	Non-financial corporations		
	Intermediate consumption		
	Gross value added		
	Compensation of employees		
	Other taxes less subsidies on production		
	Consumption of fixed capital		
	Net operating surplus/mixed income		
	Output		
	Gross fixed capital formation		
	Stock of fixed assets		
	Employment		
S.12	Financial corporations		
	Intermediate consumption		
	…		
	Employment		
S.13	General government		
S.14	Households		
S.142	Own-account workers		
	Services of owner-occupied dwellings		
S.15	NPISH		
Sector totals			
	Intermediate consumption		
	…		
	Employment		

9.09 A symmetric input-output table is shown in Table 9.4, and is a matrix showing how supply matches uses using a product-by-product or industry-by-industry categorisation of output and the detailed transactions of intermediate consumption and final uses. There is one major conceptual difference between a symmetric input-output table and a use table: in the use table, the entries show how products are used by industries in intermediate consumption, whereas in a symmetric input-output table there are two alternative presentations:

(a) the entries show how products are used as intermediate consumption to make products; or

(b) the entries show how the outputs of industry are used in the intermediate consumption of other industries to create the industrial output.

Accordingly, in a symmetric input-output table either a product or an industry classification is employed for both rows and columns.

Table 9.4 — Schematic outline of a symmetric input-output table, for products

	Products produced	Final consumption	Gross capital formation	Rest of the world	Total
Products used	Intermediate consumption	Final consumption of households, NPISHs and government	Gross capital formation	Exports	
Totals					
Components of gross value added					
Rest of the world					
Total					

9.10 Most statistical information that can be obtained from producer units indicates what type of products they have produced and sold and, usually in less detail, what type of products they have bought and used. The format of the supply and use tables is designed to fit in with this type of statistical information (i.e. products used by industry).

9.11 By contrast, information of a product-by-product or industry-by-industry nature as required by the symmetric input-output table is not often available. For example, surveys of industries usually provide information about the type of products used in production, and about the products produced and sold. Information on inputs used in making specific products is usually not available.

9.12 Information arranged in the form of supply and use tables is the starting point for constructing the more analytical form of symmetric input-output tables. The industry by product information in the supply and use tables can be converted into symmetric tables, by adding extra information on the input structures, or by assuming identical input structures or market shares by product or by industry.

9.13 Supply and use tables and the input-output framework combine three different roles:

— description,

— statistical tool,

— tool for analysis.

Description

9.14 Supply and use tables give a systematic description of the generation of income and supply of product, and use by industry. Developments of the inputs and outputs of production processes of individual industries are shown in the context of the national economy, i.e. related to the production processes of other domestic industries and the rest of the world and final consumption expenditure.

A major role of supply and use tables is to show changes in the structure of the economy, e.g. changes in the importance of various industries, changes in the inputs used and outputs produced and changes in the composition of final consumption expenditure, gross capital formation, imports and exports. Such changes may reflect developments such as globalisation, outsourcing, innovation and changes in labour costs, taxes, oil prices and exchange rates.

Supply and use tables in prices of the previous year are used to compile GDP volume growth statistics, for describing changes in economic structure in nominal or volume terms. They also provide a framework in which to present national price changes and changes in labour costs.

Statistical tool

9.15 Using information on production, expenditure and income in the construction of supply and use tables, and reconciling inconsistent estimates, generates a reliable and balanced set of national accounts, including the estimates of key aggregates such as GDP in current prices and prices of the previous year.

9.16 In measuring GDP at market prices, three basic approaches can be adopted: the production approach, the expenditure approach and the income approach. These three different approaches are used in the compilation of the supply and use tables as follows:

(a) according to the production approach, GDP at market prices is equal to output at basic prices minus intermediate consumption at purchasers' prices, plus taxes (less subsidies) on products;

(b) according to the expenditure approach, GDP at market prices is equal to the sum of final use categories minus imports: final consumption expenditure + gross capital formation + exports – imports;

(c) according to the income approach, GDP at market prices is equal to the sum of compensation of employees, consumption of fixed capital, other taxes less subsidies on production and net operating surplus/mixed income, plus taxes less subsidies on products.

A single estimate of GDP at market prices is derived when the supply and use tables are balanced.

9.17 The supply and use tables are, in particular, useful for estimating GDP at market prices according to the production approach and expenditure approach. Major data sources for this are business surveys and administrative data such as VAT records and excise duties. Supply and use tables are used to combine information from the production and expenditure approaches by calculating and balancing supply and use at the product level. In this method, supply of a specific product is calculated and allocated to various uses, such as final consumption expenditure of households, intermediate consumption and exports. The income method does not provide the same robust balancing exercise, as operating surplus and mixed income are usually estimated as a residual on the basis of information from the other two approaches. However, the income method improves the balancing when the structure of the factor income components can be estimated. The consistency of supply and use tables with the sector accounts can be checked through linkage tables as shown in Table 9.3. This confrontation can help in the estimation of GDP at market prices, by comparing information from the profit-and-loss accounts of companies with the equivalent industry estimates.

9.18 The supply and use tables serve a variety of statistical purposes:

(a) identifying gaps and inconsistencies in data sources;

(b) making estimates by residual, for example estimating the final consumption of specific products as a residual after other uses of the products have been allocated;

(c) making estimates by extrapolating figures from a base period to later periods for which less reliable information is available. For example, annual figures may be estimated on the basis of the detailed supply and use figures for a benchmark year, and later quarterly figures can be estimated by extrapolating from the reference period;

(d) checking and improving the consistency, plausibility and completeness of figures in the supply and use tables and derived figures such as those in the production accounts. To this end, the balancing process is not limited to supply and use tables at current prices:

(1) with the aid of the tables such as Table 9.3 showing the linkage with the sector accounts, a direct comparison can be made between production, expenditure and income estimates from the supply and use system, and those from independent sources used in the sector accounts. Reconciliation at this stage guarantees that, following the supply and use balancing process, consistency is obtained between the supply and use tables and the sector accounts;

(2) deriving symmetric input-output tables from the supply and use tables can give feedback revealing inconsistencies and weaknesses in the supply and use tables.

(3) by compiling supply and use tables at current prices and in volume terms for two or more years, estimates of changes in volumes, values and prices can be balanced simultaneously: compared to compiling and balancing supply and use tables for a single year in isolation at current prices only, this is a major extension of the effectiveness of the supply and use framework;

(e) weighting and calculation of index numbers and price and volume measures, e.g. of GDP by deflating final uses by product or of GDP by applying the double-deflation method by industry. Deflation is carried out at the lowest possible level of aggregation of transactions, consistent with reliable estimates of price movements, for the following reasons:

(1) generally speaking, price and volume indicators will be more representative at a low level of aggregation;

(2) quality change can be measured better at a lower level of aggregation, e.g. changes in the composition of the supply or use of a product group can be taken into account;

(3) available price indices from price statistics are often of the Laspeyres type. The objection that they are applied in place of the theoretically more appropriate Paasche type is less severe if they are used at a low level of aggregation.

Balancing of supply and use of a product is easier when the number of products distinguished is higher and the source data is available at this level of detail. The quality of the balanced results will be higher; this is in particular true when there are data gaps.

Tool for analysis

9.19 A major analytic strength of input-output tables is that they enable the measurement of not only first order effects when there are, for example, changes in energy prices or labour costs, but also second order and more indirect effects. For example, a significant increase in energy prices will affect not only those industries that use energy intensively, but also those industries that use the outputs of energy-intensive producers. Such indirect effects can be highly relevant, as they are sometimes more significant than the direct effects.

Supply and use tables in more detail

Classifications

9.20 The classification used for industries in supply, use and input-output tables is the NACE and the classification employed for products is the CPA; these classifications are fully aligned to each other: at each level of aggregation, the CPA shows the principal products of the industries according to the NACE.

9.21 In the supply and use tables, the classification for products is at least as detailed as the classification for industries, e.g. the three-digit level of the CPA and the two digit-level of the NACE.

9.22 Industry and product classifications can be based on three different types of criteria: supply-criteria, demand-criteria and size. For productivity analysis, products and their producers are in principle classified by type of production process. For analysis of demand, products are classified by similarity of purpose, for example luxury goods are grouped together, or similarity of marketing relationship such as the sales outlet type. For input-output analysis, the same classification of products or industries is used for supply and demand. The classification is defined in such a way that the size of each class is not too small or too large a part of the national economy. For international classifications, this implies that the quantitative importance of most of the classes is substantial in many countries.

9.23 The industry and product classifications in the national accounts are necessarily based on a mixture of such criteria and also the legacy of history. They are mainly defined from a producers' point of view, and so less well suited to analysing supply and demand. Compilers and users of national accounts data on industries and products should have a good notion of what is actually included and excluded in each of the groups and their implications. For example, the industry real estate activities include the services of owner-occupied dwellings and the industry insurance excludes social security funds.

9.24 Local KAUs within one industry can have different production processes. This may reflect substantial differences in vertical integration, with ancillary activities such as cleaning, transport, administration and canteen services contracted out, machinery rented, labour contracted in via temporary agencies, and marketing. It may also reflect differences between legal and illegal producers or between producers in different regions.

9.25 Due to the changing economic importance of different industries and products, changes in production processes and the appearance of new products, the industry and product classifications are updated regularly. However, a balance has to be struck between keeping abreast of changes in the economy, and the need for comparability of data over time combined with the costs involved of such major changes for the producers and users of the data.

9.26 The product classification in the supply and use tables is generally more detailed than the industry classification. There are four major reasons for this:

(a) available data on products are often much more detailed than those on industries;

(b) the characteristic output of one industry may be subject to substantially different tax regimes and prices, for example when there is price discrimination. Compilation and analysis benefit from different products being distinguished;

(c) to enable high quality deflation and the estimation of measures in volume terms, the product groups are homogeneous and well linked to the available price deflators;

(d) to ensure a transparent compilation process, separate products are needed to reveal major specific national accounts conventions, such as the services of owner-occupied dwellings, insurance and the market and non-market output by government units.

9.27 The distinction between market output, output for own final use and non-market output is only to be used for the total output by industry; the distinction is not required for each product group.

9.28 The distinction between market producers, producers for own final use and non-market producers is used for industry when such different types of producers are present. In general, this distinction will therefore only be used for sub-classifying a very limited number of industries such as health care and education.

9.29 For analysing the economy of Member States from a European perspective or for deriving supply and use tables for the whole EU, imports and exports are subdivided into:

(a) intra-EU flows, distinguishing between within the European Monetary Union and with other Member States;

(b) imports and exports with non-EU countries.

Valuation principles

9.30 In the supply table, flows of goods and services are valued at basic prices. In the use table, the flows of goods and services are valued at purchasers' prices. In order to have a consistent valuation for the supply and use tables, Table 9.5 shows the transition of supply at basic prices to supply at purchasers' prices. As supply equals use for products, two identities now hold:

(a) supply at purchasers' prices is equal to use at purchasers' prices;

(b) supply at basic prices is equal to use at basic prices.

9.31 Gross value added is recorded at basic prices. It is output valued at basic prices less intermediate consumption valued at purchasers' prices.

9.32 Gross value added at factor cost is not a concept used in the ESA. It can be derived from value added at basic prices by subtracting other taxes (less subsidies) on production.

9.33 The transition from supply at basic prices to purchasers' prices involves:

(a) reallocating trade margins;

(b) reallocating transport margins;

(c) adding taxes on products (except deductible VAT);

(d) deducting subsidies on products.

A similar transition applies to transforming use at purchasers' prices into use at basic prices; however, this will amount to deducting taxes on products and adding subsidies on products. Tables 9.8 and 9.9 show the transition in more detail. These tables also serve analytical purposes, such as analysis of prices and analysis of the consequences of changes in the rates of taxes on products.

9.34 Thus, the following tables result from the balancing process:

(a) supply and use Tables 9.5 and 9.6 showing the final results of balancing totals of supply and use by products at purchasers' prices;

(b) the tables on trade and transport margins (Table 9.7) and on taxes (less subsidies) on products (Table 9.8).

Table 9.5 — Supply table at basic prices, and the transformation into purchasers' prices

Supplies	Industries (NACE)	Rest of the world	Total supply at basic prices	Trade and transport margins	Taxes less subsidies on products	Total supply at purchasers' prices
Products (CPA) 1 2 3 4	Output by product and industry	Imports by product (CIF)	Total supply by product			
Total	Total output by industry			0		
Market output				0		
Output for own final use		0		0		
Non-market output				0		

Table 9.6 — Use table at purchasers' prices

Uses	Industries (NACE)	Final consumption	Gross capital formation	Rest of the world	Total
Products (CPA) 1 2 3 4 …	Intermediate consumption of products by industry	Final consumption expenditure by product and by (a) households (b) NPISH (c) government	Gross capital formation by product and by (a) gross fixed capital formation (b) changes in valuables (c) changes in inventories	Exports by product (FOB)	Total use by product
Total	Total intermediate consumption by industry	Total final consumption	Total gross capital formation	Total exports	Total use of products
Compensation of employees Other taxes less subsidies on production Consumption of fixed capital Net operating surplus Mixed income	Gross value added components by industry				
Total	Total inputs by industry				
Supplementary information Gross fixed capital formation Fixed capital stock Employment					

Trade and transport margins

Table 9.7 — Trade and transport margins — supply

Trade and transport margins on the supply of products				
	Wholesale trade	Retail trade	Transport	Trade and transport margins
Products (CPA) 1 2 3 4				Trade and transport margins on total supply by product
Total	Total wholesale trade	Total retail trade	Total transport	Total margins on supply by product

Table 9.7 — Trade and transport margins — use (continued)

Trade and transport margins on the use of products					
	Industries (NACE)	Final consumption	Gross capital formation	Exports	Trade and transport margins
Products (CPA) 1 2 3 4	Trade and transport margins on intermediate consumption by product and by industry	Trade and transport margins on final consumption expenditure by product and by (a) households (b) NPISH (c) government	Trade and transport margins on gross capital formation by product and by (a) gross fixed capital formation (b) changes in valuables (c) changes in inventories	Trade and transport margins on exports	Trade and transport margins on total use by product
Total	Trade and transport margins on intermediate consumption, total by industry	Total trade and transport margins on final consumption	Total trade and transport margins on gross capital formation	Total trade and transport margins on exports	Total margins on use by product

9.35 Part of the transition of supply tables from basic prices to purchasers' prices, and the transition of use tables at purchasers' prices into basic prices, is the reallocation of trade margins. Valuation at basic prices implies that the trade margins are recorded as part of the product trade, while valuation at purchasers' prices implies that the trade margins are allocated to the products to which they apply. The same situation holds for transport margins.

9.36 The total of trade margins by product is equal to the total of trade margins by the trade industries plus the trade margins by other industries. The same identity holds for transport margins.

9.37 Transport margins include transportation costs paid separately by the purchaser and included in the use of products at purchasers' prices but not in the basic prices of a manufacturers' output or in the trade margins of wholesale or retail traders. Such transport margins include in particular:

(a) transport of goods from where they are manufactured to where the purchaser takes delivery of them, in the event that the manufacturer pays a third party for the transport and provided that this amount is invoiced separately to the purchaser;

(b) transport of goods arranged by the manufacturer or by the wholesale or retail trader in such a way that the purchaser has to pay separately for the transport costs even when the transport is carried out by the manufacturer or the wholesale or retail trader themselves.

9.38 All other costs of transporting goods are not recorded as transport margins, e.g.:

(a) if the manufacturer transports the goods himself, such transportation costs are included in the basic prices of the manufacturer's output; this transport represents an ancillary activity and the individual costs of transport are not identifiable as transportation costs;

(b) if the manufacturer arranges for the goods to be transported without a separate invoice for the transport services, such transportation costs are included in the basic prices of the manufacturer's output; such transportation costs are identifiable as such and are recorded as part of the manufacturer's intermediate consumption;

(c) if wholesale and retail traders arrange for goods to be moved from where they take delivery of them to where another purchaser takes delivery, the costs involved are included in the trade margin if no separate charge is made for transportation to the purchaser. Again, as with manufacturers, such costs represent an ancillary activity of wholesale and retail traders or the purchase of an intermediate service, thus entering trade margins but not transport margins;

(d) if a household buys goods for final consumption purposes and arranges for transport by a third party, the transport costs involved are recorded as final consumption expenditure on transport services and not included in trade or transport margins.

9.39 Table 9.7 shows a somewhat simplified picture of a trade and transport margins matrix, for the following reasons.

(a) In transforming the uses, a distinction needs to be made between wholesale trade and retail trade in order to take account of the differences in their prices. In drawing up the tables, it should be borne in mind that wholesale traders sell directly to households as well as industries, for example furniture, and that retail traders sell to industries such as cafes and restaurants, as well as households.

(b) In calculating and analysing trade margins on products for final consumption expenditure by households, for each product group the most important distribution channels may also be distinguished in order to take account of the differences in their prices; the distinction between wholesale trade and retail trade is not detailed enough. For example, goods and services can be bought by households in a supermarket, a grocery, flower shop, department store, abroad or obtained as income in kind. For some products, secondary sales are important, as in the case of cigarette sales by cafes, restaurants and petrol stations. Sales by retailers are adjusted to obtain the value of sales to households, for example sales to businesses, government and tourists should be deducted. Of course, such distinctions can only be introduced if the available data sources provide sufficient information for estimates of the importance of each of the distribution channels. Even for one trader or transporter, different products generally have different margins. Data on margins by type of product are the most appropriate and used when available.

(c) In calculating transport margins, a distinction by type of transport such as rail, air, sea and inland waterway, and road, is useful.

Taxes less subsidies on production and imports

9.40 Taxes on production and imports consist of:

(a) taxes on products (D.21):

(1) value added type taxes (VAT) (D.211);

(2) taxes and duties on imports excluding VAT (D.212);

(3) taxes on products, except VAT and import taxes (D.214);

(b) other taxes on production (D.29).

Similar categories are distinguished for subsidies.

9.41 Supply at basic prices includes other taxes less subsidies on production. In order to make the transition from basic prices to purchasers' prices, the various taxes on products are added and the subsidies on products deducted.

Table 9.8 — Taxes less subsidies on products

Taxes less subsidies on supply						
	Taxes less subsidies on product supplies					Total taxes less subsidies on products
	VAT	Taxes on imports	Other taxes on products	Subsidies on imports	Other subsidies on products	
Products (CPA) 1 2 3 4						Taxes less subsidies on total supply by product and by use
Totals						

Table 9.8 — Taxes less subsidies on products (continued)

Taxes less subsidies on uses		
	Total taxes less subsidies on products	Taxes less subsidies on product uses
		Industries (NACE)
Products (CPA) 1 2 3 4	Taxes less subsidies on products for final uses: Final consumption (a) households (b) NPISH (c) government Gross capital formation: (d) gross fixed capital formation (e) changes in valuables (f) changes in inventories Exports	Taxes less subsidies on intermediate consumption of products by industry

9.42 Table 9.8 on taxes less subsidies on products is simplified, in the following ways:

(a) for the use of products, the different types of taxes on products are not distinguished and subsidies are not shown separately; for the supply of products, only three types of taxes on products and two types of subsidies are distinguished. In general, it is useful to show each major type of tax or subsidies on products separately, and then allocate the total to the various product groups;

(b) different tax rates and subsidies can apply to different distribution channels; the latter should therefore also be distinguished when relevant and sufficient information exists.

9.43 Taxes and subsidies on products are the amounts due for payment only when evidenced by tax assessments, declarations, etc. or the amounts actually paid. In compiling supply and use tables, taxes and subsidies on products are usually estimated by product by applying the official tax or subsidy rates to the various demand flows. Afterwards an assessment should be made of the differences with the tax assessments or the amounts actually paid.

(a) Some of these differences indicate that the initial estimate of taxes on products in the supply and use tables does not comply with the ESA definitions:

(1) in case of exemption the initial estimate of taxes on products is therefore lowered;

(2) in case of hidden economic activities or evasion of the payment of taxes on products, such as when the payment of taxes is compulsory but there is no tax assessment, the estimate of taxes on products is therefore lowered.

(b) In some instances, the differences may indicate that the initial estimate for taxes and subsidies on products erroneous, for example because the output of some product is underestimated.

Modifications of the estimates of the flows of goods and services can then be made.

9.44 VAT may be deductible, non-deductible or not applicable:

(a) deductible VAT applies to most of intermediate consumption, most of gross fixed capital formation and part of changes in inventories;

(b) non-deductible VAT often applies to final consumption expenditure by households, part of gross fixed capital formation such as new owner-occupied dwellings, part of changes in inventories and part of intermediate consumption, for example intermediate consumption of government units and financial corporations;

(c) VAT is in general not applicable to:

(1) exports to countries outside the EU;

(2) the sale of any goods or services subject to a zero rate of VAT regardless of their use; however, a zero rate of VAT implies that the VAT paid on purchases can still be reclaimed; intermediate consumption and gross capital formation of these producers is therefore corrected by the amount of the VAT reclaimed;

(3) any producers exempted from VAT registration, such as small businesses and religious organisations; in this situation, the right to claim back the VAT on purchases is generally restricted.

9.45 VAT is recorded net: all supplies are valued at basic prices, i.e. excluding invoiced VAT; intermediate and final uses are recorded at purchasers' prices, i.e. excluding deductible VAT.

Other basic concepts

9.46 In the supply and use tables, two adjustment items are used in reconciling the valuation of imports in the supply and use tables and the valuation found in the institutional sector accounts.

In the supply table, in order to achieve a comparable valuation with domestic production in the same product group, imports of goods are valued at CIF values. The CIF value includes the transport and insurance services provided by residents, such as own-account transport or transport by specialised resident carriers. In order to achieve a consistent valuation between imports and exports, exports of services should include this value.

In the institutional sector accounts, imports of goods are valued at FOB values, i.e. in line with the valuation for exports of goods. However, in the case of FOB valuation the value of transport and insurance services provided by residents, which is included in the export of services, will be smaller, since it only covers those services provided inside the exporting country. The result of employing different valuation principles is thus that net total imports are the same, but that both total imports and total exports are larger for CIF valuation.

The two valuation principles can be reconciled in the supply and use tables by introducing adjustment items for imports as well as exports. The adjustment items should be equal to the value of the transport and insurance services by residents incorporated in the CIF value but not in the FOB value, i.e. referring to the transport and insurance from the border of the exporting country to the border of the importing country. Such adjustment items, once incorporated in the supply and use tables, need no special treatment in the input-output calculations.

9.47 The transfer of existing goods is recorded in the use table as a negative expenditure for the seller and a positive expenditure for the purchaser. For the product group involved, the transfer of an existing good amounts to a reclassification among uses. Only the transaction costs are not treated as a reclassification: they are recorded as a use of services, for example business or professional services. For the purposes of description and analysis, it can be useful to show for some product groups the relative size of the transfer of existing goods separately, for example the importance of second-hand cars in the market for both new and second-hand cars, or the role of recycled paper in the supply of paper products.

9.48 For a good understanding of supply and use tables, it is helpful to recall some of the accounting conventions employed in the ESA:

(a) industries constitute of a group of kind-of-activity units (KAUs) engaged in the same or similar kind-of-activity. An important feature of supply and use tables is that they record secondary activities separately. This implies that KAUs need not to be homogeneous in their production activities. The concept of KAUs is explained in more detail in Chapter 2. A completely homogeneous unit of production is used in a symmetric product by product input-output table;

(b) if an establishment undertaking purely ancillary activities is statistically observable, in that separate accounts for the production it undertakes are readily available, or if it is in a geographically different location from the establishments it serves, it is recorded as a separate unit and allocated to the industrial classification corresponding to its principal activity, in both national and regional accounts. In the absence of suitable basic data being available, the output of the ancillary activity may be estimated by summing costs.

If neither of these two conditions is met, all inputs consumed by an ancillary activity such as materials, labour, and consumption of fixed capital, are treated as inputs to the principal or secondary activity which they support;

(c) goods or services produced and consumed within the same accounting period and within the same local KAU are not separately identified. They are therefore not recorded as part of the output or intermediate consumption of that local KAU;

(d) minor processing, maintenance, servicing or repair on behalf of other local KAUs is to be recorded net, i.e. excluding the value of the goods involved;

(e) imports and exports occur when there is a change of ownership between residents and non-residents. Physical movement of goods across national borders does not by itself imply an import or export of these goods. Goods sent abroad for processing are not recorded as exports and imports. In contrast, buying and reselling goods with non-residents without the goods entering the merchant's economy are recorded as exports and imports in the accounts of the producer and final purchaser, and a net export of goods under merchanting is shown in the accounts of the merchant economy;

(f) durable goods can be rented or be subject to operating leasing. In such instances, they are recorded as fixed capital formation and fixed capital stock in their owner's industry; in the industry of the user intermediate consumption by amount of the rental paid is recorded;

(g) persons working via temporary agencies are recorded as being employed in the industry of those agencies and not in the industries in which they actually work. As a consequence, in the latter industries, the fees paid to the agency for the supply of labour are recorded as intermediate consumption and not as compensation of employees. Labour contracted out is treated as services provided;

(h) employment and compensation of employees are broad concepts:

(1) employment for social reasons is also counted as employment; this applies, for example, to work placements for disabled people, employment projects for people who have been unemployed for a long time and employment programmes for young people seeking jobs. As a consequence, the people involved are employees and receive employee compensation and not social transfers, though their productivity may be lower than that of other employees;

(2) employment includes cases where the persons involved are not expected to work at all, e.g. persons dismissed but receiving, for a given period, payments from their former employer. However, employment in terms of hours worked is not distorted by this convention, as no hours are actually worked.

Supplementary information

9.49 The use Table 9.6 contains supplementary information: gross fixed capital formation, stocks of fixed assets and employment by industry. A breakdown into employees and own-account workers is valuable additional information. The information on gross fixed capital formation and stocks of fixed assets by industry is needed to derive consumption of fixed capital by industry and for recording non-deductible VAT on gross fixed capital formation. Showing employment by industry is important for compilation purposes:

— employment figures are often used for grossing up values of output, compensation of employees, intermediate consumption and mixed income,

— key-ratios such as output, compensation of employees and mixed income per unit of labour such as hours worked, can be compared over time and by industry to check the plausibility of the estimates,

— it helps to ensure consistency between the values by industry and employment data by industry. For example, without an explicit link to employment data, the balancing process may result in changes in the values by industry without corresponding changes in the employment figures.

Adding information on employment by industry is also helpful for the analysis of employment and productivity.

Data sources and balancing

9.50 For compiling output by industry and product, the major data sources are usually enterprise economic surveys, production surveys and annual reports or business accounts from major companies. The surveys are generally exhaustive for large companies while a sample survey is carried out for small size companies. For some specific activities, different data sources may be relevant, for example for supervisory bodies, accounts of local and central government or social security funds.

9.51 Such data are used to prepare a first incomplete set of supply and use tables. These are balanced in various steps. Balancing manually at a low level of aggregation provides important checks on the errors in data sources, system errors, and at the same time modifications of the basic data can be made, to correct for conceptual differences and missing units. If the reconciliation takes place at a higher level of aggregation, using an automatic balancing process or a very strict sequential balancing process, most of those checks are absent as errors cancel out and the causes of error cannot be traced.

Tool for analysis and extensions

9.52 For analysis, three types of tables can be used:

— supply and use tables,

— symmetric input-output table industry by industry,

— symmetric input-output table product by product.

Symmetric input-output tables can be derived from the supply and use tables, in current prices, and also in previous years' prices.

9.53 Use Table 9.6 does not show to what extent the goods and services used have been produced domestically or imported. This information is necessary for analyses in which the link between supply and use of goods and services within the national economy plays a role. An example is the analysis of the impact of changes in exports or final consumption expenditure on imports, domestic production and related variables such as employment. The input-output framework, therefore, would benefit from separate use tables for imported products and domestically produced goods and services.

9.54 The use table for imported products is compiled by exploiting all information available on the uses of imports, for example for some products the major importing enterprises may be known and for some producers information on the amount of imports may exist. However, in general, direct statistical information on the use of imports is scarce. This information has therefore usually to be supplemented by assumptions over the allocation of product group to use.

9.55 The use table for goods and services produced domestically can then be obtained by deducting the use table for imported products from the use table for the whole economy.

9.56 In theory, four basic models exist for the transformation of a supply and use table to a symmetric input-output table. Those models are based on either technology or fixed sales structure assumptions. Most often used is the product technology assumption: each product is produced in its own specific way, irrespective of the industry where it is produced. This assumption is often used to derive a product-by-product input-output table. The second common model uses the fixed product sales structure assumption (market share assumption): each product has its own specific sales structure, irrespective of the industry which produces it; this approach is often used to derive an industry-by-industry input-output table. Hybrid models which mix these assumptions are possible. Models based on either industry technology or fixed industry sales structure assumptions are of less practical relevance due to their low probability of occurrence in practice. A discussion of the alternative models and transformation processes is given in Chapter 11 of *Eurostat Manual of Supply, Use and Input-output Tables (2008 edition)*[1].

9.57 The choice of the best assumption to apply in each case is not an easy one. It depends on the structure of national industries, e.g. the degree of specialisation, and on the homogeneity of the national technologies used to produce products within the same product group and not the least on the level of detail of the basic data.

Simple application of the product technology assumption gives results that are unacceptable, insofar as the input-output coefficients sometimes generated are improbable or even impossible, in the form of negative coefficients. Improbable coefficients may be due to errors in measurement and to heterogeneity of product-mix in the industry of which the transferred product is the principal product. This can be tackled by making adjustments based on supplementary information or exploiting informed judgement to the fullest extent possible. Another solution is to apply the alternative assumption of fixed product sales structure. In practice, employing mixed technology assumptions combined with supplementary information has proven to be a useful approach for compiling symmetric input-output tables.

9.58 The symmetric input-output table can be broken down into two tables:

((a) a matrix showing the use of imports; the format of this table is the same as that of the import table supporting the supply and use tables, except that a symmetric structure with the same classification on both axes is used;

((b) a symmetric input-output table for domestic output.

The latter table should be used in calculating the cumulated coefficients, i.e. the Leontief inverse. The Leontief inverse is the inverse of the difference between the identity matrix I and the matrix of technical input coefficients obtained from the matrix of domestic output used as intermediate consumption. The Leontief inverse can also be derived for imports. It should then be assumed that the imports have been produced in the same way as the competing domestic products.

9.59 Supply and use tables and symmetric input-output tables can be used as tools of economic analysis. Both types of tables have different merits. Symmetric input-output tables are readily available for calculating not only direct but also indirect and cumulative effects. They can also be of good quality when expert knowledge and various types of statistical information have been used in deriving the tables from the supply and use tables.

9.60 Industry-by-industry tables are well suited for analyses related to industries, e.g. tax reform, impact analysis, fiscal policy and monetary policy; they are also closer to the various statistical data sources. Product-by-product tables are well suited for analyses related to homogeneous production units, e.g. productivity, comparison of cost structures, employment effects, energy policy and environmental policy.

9.61 However, the analytical properties of product-by-product tables and industry-by-industry tables do not differ significantly. The differences between product-by-product tables and industry-by-industry tables are caused by the existence of a generally limited amount of secondary production. In practice, analytical uses of input-output tables implicitly assume an industry technology, no matter how the tables have originally been compiled. Furthermore, in practice, any product-by-product table is a manipulated industry-by-industry table, as it still contains all the institutional KAU and enterprise characteristics of the supply and use tables.

9.62 In general, many specific types of analysis are served by supply and use tables and symmetric input-output tables, for example:

(a) analysis of production, cost structures and productivity;

(b) analysis of prices;

[1] Eurostat, *Eurostat Manual of Supply, Use and Input-Output Tables (2008 edition)*, 2008, (available on: http://epp.eurostat.ec.europa.eu).

(c) analysis of employment;

(d) analysis of the structure of capital formation, final consumption, exports, etc.;

(e) analysis of economic growth by using the cumulated costs shares to allocate imports to the various final uses;

(f) analysis of the contribution to economic growth and employment of exports to other (blocks) of countries;

(g) analysis of imports of energy required;

(h) analysis of the impact of new technologies;

(i) analysis of the effects of changes in tax rates (e.g. VAT) or the introduction of a national minimum wage;

(j) analysis of the relationship between domestic production and the environment, e.g. focusing on the use of specific products like fuel, paper and glass or the emission of pollutants.

A macro model may also only include the cumulated costs-shares calculated from the input-output tables. In this way, information from the input-output table on direct and indirect effects, e.g. the importance of labour costs or imports of energy for private consumption or exports, is incorporated in the macro model and can be used for analysis and forecasting.

9.63 In order to serve more specific purposes, the supply and use tables and symmetric input-output tables can be modified by introducing alternative and supplementary classifications. The most important examples are as follows:

(a) more detailed product and industry classifications based on national classifications or to take account of specific purposes, e.g. for the analysis of the role of research and development in the national economy;

(b) more detailed geographical breakdown of imports and exports, e.g. intra-EU trade sub classified by country and extra-EU trade sub classified by economic regions and some specific countries such as China, India, Japan and the United States;

(c) classification of imports into:

(1) imports of products that are also domestically produced ('competitive imports');

(2) imports of products that are not domestically produced ('complementary imports').

Both types of imports can be expected to have a different relationship with and importance for the national economy. Competitive imports can be the subject of analysis and economic policy as they may be a substitute for domestic output; they could therefore be incorporated as a separate category of potential final use in the use tables. For complementary imports, for example in the case of a sudden rise in energy prices, analyses will mainly focus on the impact of changes in their prices and the national economy;

(d) classification of compensation of employees by criteria such as level of education, part-time/full-time, age and gender. This classification could then also be applied to the supplementary information on employment. In this way, the supply and use tables can also be used for analyses of the labour market;

(e) breakdown of compensation of employees into:

(1) wages and salaries, including social contributions by employees

(2) employers' social contributions.

This breakdown permits analysis of the role of social contributions for the price of labour inputs and the shifting of this burden towards gross operating surplus;

(f) classification of final consumption by purpose, which for households is Coicop, for NPISH it is COPNI and for government it is COFOG. The functional classification of this expenditure enables the impact of each function of the rest of the economy to be assessed. For example, the importance of public and private expenditure on health care, transport and education can then be assessed.

CHAPTER 10

Price and volume measures

10.01 In a system of economic accounts, all the flows and stocks are expressed in monetary units. The monetary unit is the only common denominator which can be used to value the extremely diverse transactions recorded in the accounts and to derive meaningful balancing items.

The problem when using the monetary unit as a measuring unit is that this unit is neither a stable nor an international standard. A major concern in economic analysis is to measure economic growth in volume terms between different periods. It is then necessary to distinguish, in the value changes for certain economic aggregates, the changes arising solely from price changes from the remainder which is called the change in 'volume'.

Economic analysis is also concerned with comparisons in space, i.e. between different national economies. These focus on international comparisons in volume terms of the level of production and income, but the level of prices is also of interest. It is therefore necessary to factor the differences in value of economic aggregates between pairs or groups of countries into components, which reflect the differences in volume and the differences in price.

10.02 When time comparisons of flows and stocks are concerned, equal importance is to be attached to the accurate measurement of changes in prices and in volumes. In the short term, observation of price changes is of no less interest than the measurement of the volume of supply and demand. On a longer-term basis, the study of economic growth has to take account of movements in the relative prices of the different types of goods and services.

The primary objective is not simply to provide comprehensive measures of changes in prices and volumes for the main aggregates of the system but to assemble a set of interdependent measures which make it possible to carry out systematic and detailed analyses of inflation and economic growth and fluctuations.

10.03 The general rule for comparisons in space is that accurate measures must be made for both the volume and the price components of the economic aggregates. As the spread between the Laspeyres and Paasche formulae often is significant in spatial comparisons, the Fisher index formula is the only acceptable one for this purpose.

10.04 Economic accounts have the advantage of providing a suitable framework for constructing a system of volume and price indices as well as ensuring the consistency of the statistical data. The advantages of an accounting approach can be summarised as follows.

(a) On a conceptual level, the use of an accounting framework covering the entire economic system requires the prices and physical units for the different products and flows in the system to be specified consistently. In a framework of this type, the price and volume concepts for a given group of products are defined identically in both resources and uses.

(b) On a statistical level, the use of the economic accounts framework imposes accounting constraints which must be respected at both current prices and in volume terms and will normally require some adjustments to be made to ensure consistency of the price and volume data.

(c) Furthermore, the creation of an integrated system of price and volume indices in the context of a system of economic accounts provides the national accountant with extra checks. Assuming the existence of a balanced system of supply and use tables at current prices, the construction of such balanced tables in volume terms means that a system of implicit price indices can be automatically derived. Examination of the plausibility of these derived indices can lead to revision and correction of the data in volume terms and even, in some cases, of the values at current prices.

(d) The accounting approach permits the measurement of price and volume changes for certain balancing items in the accounts, the latter being derived by definition from the other elements in the accounts.

10.05 Despite the advantages of an integrated system based on the balance, both overall and by industry, of transactions in goods and services, it has to be acknowledged that the price and volume indices thus obtained do not meet all needs or answer all possible questions on the subject of change in prices or volume. Accounting constraints and the choice of price and volume index formulae, although essential for the construction of a coherent system, can sometimes be a hindrance. There is also a need for information for shorter periods such as months or quarters. In such cases, other forms of price and volume indices may prove useful.

Scope of price and volume indices in the national accounts

10.06 Amongst the flows, which appear in economic accounts at current prices, there are some, mainly concerning products, where the distinction between changes in price and volume is similar to that made at microeconomic level. For many other flows in the system, the distinction is far less obvious.

Where the flows in the accounts cover a group of elementary transactions in goods and services, the value of each being equivalent to the product of a number of physical units and their respective unit price, it is sufficient to know the breakdown of the flow into its components in order to determine changes in price and volume over time.

Where a flow comprises a number of transactions relating to distribution and financial intermediation as well as to balancing items such as value added, it is difficult or even impossible to separate directly current values into price and volume components, and special solutions have to be adopted.

There is also a need to measure the real purchasing power of a number of aggregates, such as compensation of employees, disposable income of households or national income. This can be done, for example, by deflating them by means of an index of the prices of the goods and services which can be bought with them.

10.07 The objective and the procedure followed when measuring the real purchasing power of income estimates are different from those followed when deflating goods and services and balancing items. For flows of goods and services an integrated system of price and volume indices can be established, which provides a consistent framework for measuring economic growth. The valuation in real terms of flows of income uses price indices which are not strictly linked to the income flow. So the choice of price for income growth can differ according to the objectives of the analysis: there is no unique price identified in the integrated system of price and volume indices.

The integrated system of price and volume indices

10.08 The systematic division of changes in current values into the components 'changes in price' and 'changes in volume' is restricted to flows representing transactions, recorded in the goods and services accounts and in the supporting supply and use framework. It is carried out both for the data relating to individual industries and products, and for those relating to the total economy. Flows which are balancing items, such as value added, cannot be directly factored into price and volume components; this can only be done indirectly using the relevant flows of transactions.

The use of the accounting framework imposes a double constraint on the calculation of the data:

(a) the balance of the goods and services account must for any sequence of two years be obtained at both current prices and in volume terms;

(b) each flow at the level of the total economy must be equal to the sum of the corresponding flows for the various industries.

A third constraint, not inherent in the use of an accounting framework but resulting from a deliberate choice, is that every change in the value of transactions must be attributed either to a change in price or to a change in volume, or to a combination of the two.

If those three requirements are fulfilled, valuation of the goods and services accounts and production accounts in volume terms means that an integrated set of price and volume indices can be obtained.

10.09 The items to be considered when constructing such an integrated set are as follows:

Transactions in products	
Output	P.1
Market output	P.11
Output for own final use	P.12
Non-market output	P.13
Intermediate consumption	P.2
Final consumption expenditure	P.3
Individual final consumption expenditure	P.31
Collective final consumption expenditure	P.32
Actual final consumption	P.4
Actual final individual consumption	P.41
Actual final collective consumption	P.42
Gross capital formation	P.5
Gross fixed capital formation	P.51
Changes in inventories	P.52
Acquisition less disposals of valuables	P.53
Exports of goods and services	P.6
Exports of goods	P.61
Exports of services	P.62
Imports of goods and services	P.7
Imports of goods	P.71
Imports of services	P.72
Taxes and subsidies on products	
Taxes on products, excluding VAT	D.212 and D.214
Subsidies on products	D.31
VAT on products	D.211
Balancing items	
Value added	B.1
Gross domestic product	B.l*g

Other price and volume indices

10.10 In addition to the price and volume measures considered above, the following aggregates can also be subdivided into their own price and volume components. The objectives for these measures vary.

Inventories at the beginning and at the end respectively of each period may have to be calculated in volume terms in order to have the balance sheet aggregates. The stock of produced fixed assets has to be calculated in volume terms to estimate capital output ratios, as well as to obtain a basis for estimating consumption of fixed capital in volume terms. Compensation of employees can be calculated in volume terms for purposes of measuring productivity and in some instances also when outputs have been estimated by using data in volume terms on inputs. Consumption of fixed capital, other taxes on production and other subsidies on production must also be estimated in volume terms when calculating costs in volume terms.

10.11 Compensation of employees is an element of income. For the purpose of measuring purchasing power, it can be valued in real terms by deflating with an index reflecting the prices of products purchased by employees. Other income elements too, such as disposable income of households and national income, can be measured in real terms in the same general way.

General principles of measuring price and volume indices

Definition of prices and volumes of market products

10.12 Volume and price indices can only be derived for variables that have price and quantity elements. The notions of price and quantity are closely linked to that of homogeneous products, i.e. products for which it is possible to define units which are all considered equivalent and which can thus be exchanged for the same monetary value. It is thus possible to define the price of a homogeneous product as the amount of money for which each product unit can be exchanged.

For each homogeneous product flow, e.g. output, it is thus possible to define a price (p), a quantity (q) corresponding to the number of units and a value (v) defined by the equation:

$$v = p \times q$$

Quality, price and homogeneous products

10.13 Another way of defining a homogeneous product is to say that it consists of units of the same quality.

Homogeneous products play an essential role in national accounts. Indeed, output is valued at basic price determined by the market at the time when it takes place, i.e. very often before sale. The units produced have therefore to be valued, not at the price at which they will actually be sold, but at the price at which equivalent units are sold at the time of production of the units concerned. This is possible in a rigorous way only for homogeneous products.

10.14 In practice, however, two units of a product with identical physical characteristics may be sold at different prices for two types of reasons.

(a) Two units with identical physical characteristics can be considered as not being equivalent if they are sold in different places, at different periods or according to different conditions. In this case, the units have to be regarded as corresponding to different homogeneous products.

(b) Two units with identical physical characteristics can be sold at different prices, either due to lack of information, or to restrictions brought to purchase freedom, or to the existence of parallel markets. In this case, the units have to be regarded as belonging to the same homogeneous product.

A homogeneous product can thus also be defined as a product of which all units would be sold at the same price in perfect competition. In the absence of perfect competition, the homogeneous product price is defined by the average price of its units. Therefore, in national accounts, for each homogeneous product there is one price and only one price, so that it is possible to apply general rules of valuation of products.

10.15 Lack of information means that purchasers may not always be properly informed about existing price differences and may therefore inadvertently buy at higher prices. This, or the opposite, may occur also in situations where individual buyers and sellers negotiate or bargain over the price. On the other hand, the difference between the average price of a good purchased in a market or a bazaar, where such bargaining often occurs, and the price of the same good sold in a different type of retail outlet, such as a department store, should normally be treated as reflecting differences in quality due to different sales conditions.

10.16 Price discrimination implies that sellers may be in a position to charge different prices to different categories of purchasers for identical goods and services sold under exactly the same circumstances.

In such cases, there is no or limited freedom of choice on the part of a purchaser belonging to a special category. The principle adopted is that variations in price are to be regarded as price discrimination when different prices are charged for identical units sold under exactly the same circumstances in a clearly separable market, i.e. when different prices are charged for the same homogeneous product. Price variations due to such discrimination do not constitute differences in volume.

The possibility of the retrading of goods in a given market implies that price discrimination for those types of products in most cases can be assumed to be insignificant. The price differences that may exist for goods can normally be interpreted as due to lack of information or to the existence of parallel markets.

In service industries, e.g. in transportation, producers may charge lower prices to groups of individuals with typically lower incomes, such as pensioners or students. If such individuals are free to travel at whatever time they choose, this must be treated as price discrimination. However, if they are charged lower fares on condition that they travel only at certain times, typically off-peak times, they are being offered lower-quality transportation since transportation with conditions and transportation without conditions can be considered as different homogeneous products.

10.17 Parallel markets may exist for several reasons. Buyers may be unable to buy as much as they would like at a lower price because there is insufficient supply available at that price, and a secondary, parallel market, where higher prices are quoted, may exist. There is also the possibility that a parallel market exists, where sellers can charge lower prices because they can avoid certain taxes.

10.18 Thus, if quality is defined by all the characteristics common to all units of a homogeneous product, differences in quality are reflected by the following factors:

(a) physical characteristics;

(b) deliveries in different locations;

(c) deliveries at different times of the day or at different periods of the year;

(d) differences in conditions of sale or the circumstances or environment in which goods or services are supplied.

Prices and volume

10.19 The introduction of the notion of volume in national accounts rests on the desire to eliminate the effect of price variation in the pattern of values expressed in monetary units, and it thus appears as an extended use of the notion of quantity for groups of products. In fact, for a given homogeneous product the equation $v = p \times q$ allows the change of a value over time to be broken down into change of price and change of quantity. In practice, however, there are too many homogeneous products to be dealt with individually, with the result that national accountants have to work at a more aggregated level. At this aggregated level, however, the equation $v = p \times q$ is no longer useful since, while it is possible to aggregate values, it is not meaningful to aggregate quantities in order to derive prices.

10.20 There is however a simple way of breaking down the change in the value of a set of homogeneous products between two periods, one of which is considered the base period and the other the current period. The effect of change in price can be offset by calculating what the value of the set of products would have been if there had been no change in prices, i.e. by applying the prices of the base period to the quantities of the current period. This value at prices of the base period defines the notion of volume.

In this way, the value of a set of products in the current period may be written as:

$$v^1 = \Sigma_i p_i^1 \times q_i^1$$

Where exponent 1 refers to the current period and index i to a specific homogeneous product. The volume of the set of products for the current period is thus defined in relation to the base period by the formula:

$$Volume = \Sigma_i p_i^0 \times q_i^1$$

Where exponent 0 refers to the base period. By comparing the volume of the set of products for the current period and their overall value for the base period it is possible to measure a change which is not affected by any price variation. A volume index can thus be calculated by the formula:

$$IVol^1 = \frac{\Sigma_i p_i^0 \times q_i^1}{\Sigma_i p_i^0 \times q_i^0}$$

The volume index which is thus defined is a Laspeyres index of quantities in which each basic index is weighted by the proportion of the basic product in the overall value of the base period.

Once the notion of volume has been defined, it is possible to define by analogy with the equation v = p × q not a price but a price index. The price index is thus defined by the ratio between the value for the current period and the volume, i.e. by the formula:

$$IP^1 = \frac{\Sigma_i p_i^1 \times q_i^1}{\Sigma_i p_i^0 \times q_i^1}$$

This index is a Paasche price index in which each base price index is weighted by the proportion of the base product in the overall value for the current period.

The volume and price indices defined in this way prove the equation:

Value index = price index × volume index

This equation is a more general version of the equation v = p × q and it allows any change in the value of a set of products to be broken down into a change in volume and a change in price.

In the calculation of the volume, quantities are weighted up by prices of the base period, so that the result depends on the price structure. Changes in price structure are likely to be less important for short periods than for long periods. Therefore, the calculation of the volume is made only for two successive years, i.e. the volume is calculated at the prices of the previous year.

For comparisons over longer periods of time, the Laspeyres volume indices and the Paasche price indices are calculated first in relation to the previous year and then the chain indices are determined.

10.21 The main advantages of using Paasche price indices and Laspeyres volume indices are the interpretation and calculation simplicity and the additivity property in the supply and use balances.

10.22 Chained indices present the drawback that they lead to volumes having no additivity so that they cannot be used in the balancing procedures of products based on supply and use tables.

10.23 The non-additive volume data calculated with chain indices are to be published without any adjustment. This method is transparent and indicates to users the extent of the problem. This does not preclude the possibility that there may be circumstances in which compilers may judge it preferable to eliminate the discrepancies in order to improve the overall consistency of the data. When reference year values are extrapolated by chain volume indices, an explanation has to be provided to users concerning the absence of additivity in the tables.

10.24 In practice, since it is impossible to measure prices and quantities for all the homogeneous products of an economy, volume or price indices are calculated using samples of representative homogeneous products, the underlying idea being that the volumes or prices of products not included in the sample change in the same way as the sample average. It is therefore necessary to use a product classification which is as detailed as practicable so that each product identified has maximum homogeneity, regardless of the level of detail used in the presentation of results.

10.25 In view of the equation linking the value, price and volume indices, only two indices need to be calculated. Usually, the value index is obtained directly by simply comparing the overall values for the current and base periods. It is then a matter of choosing between a price index and a volume index to be calculated. In most cases the assumption of parallel change which underlies the method is proven more by prices than by volumes because the prices of different products are often significantly influenced by certain common factors such as the cost of raw materials and wages. In this case, the price index is to be calculated using a sample of products of constant quality over time, with quality being determined not only by the physical characteristics of the product but also by the conditions of sale, as explained above. In this way all the variations in the overall value caused by structural changes among the various products will appear as variations in volume and not in price.

In some cases, however, it will be easier to calculate a volume index and to use it to derive a price index. Occasionally it may even be preferable to calculate the value index on the basis of a price index and a volume index.

New products

10.26 The method of calculating price and volume indices outlined above assumes that the products exist in both successive years. In actual fact, however, many products appear and disappear from one year to the next and the price and volume indices need to reflect this. Where volume is defined using the prices of the previous year, there is no particular difficulty in the case of products which existed in the previous year but which no longer exist in the current year, since they are simply linked to a zero quantity for the current year. The problem is more complicated in the case of new products, since for the previous year it is not possible to measure the price of a product which does not exist.

There are two types of approaches in such a case for estimating the price for the previous year: the first supposes that the price of the new product changes like the price of similar products, while the second attempts to calculate directly what the price of the new product would have been if it had existed in the base period. The first approach amounts simply to using a price index calculated on the basis of a sample of homogeneous products existing in both successive years, and in practice this is the method used for most new products since new products are generally too numerous to be explicitly specified, especially when the definition of homogeneous products is strictly applied. With the second approach, the methods which are most commonly used are the hedonic method which consists of determining the price of a product on the basis of its main characteristics and the input method which uses the cost of a product to calculate its price.

The matter of new products has particular importance in certain fields. Many capital goods are produced only as a single item and thus appear as new products. This is also the case of many services which are never provided in exactly the same way, e.g. research and development services.

10.27 For transactions in services it is frequently more difficult to specify the characteristics which determine the physical units, and differences of opinion may arise concerning the criteria to be used. This difficulty may concern important industries such as financial intermediation services, wholesale and retail trade, services to enterprises, education, research and development, health or recreation. The choice of physical units for such activities is presented in *Handbook on price and volume measures in national accounts*[1].

Principles for non-market services

10.28 The establishment of a comprehensive system of price and volume indices covering all supply and uses of goods and services involves a particular difficulty when measuring the output of non-market services. Such services differ from market services in that they are not sold at a market price and their value at current prices is calculated as the sum of the costs incurred. Those costs are: intermediate consumption, compensation of employees, other taxes less subsidies on production and consumption of fixed capital.

10.29 In the absence of a unit market price, the unit cost of a non-market service can be considered as the equivalent to the price. In fact, the price of a market product corresponds to the expenditure which the purchaser must incur in order to take possession of it, while the unit cost of a non-market service corresponds to the expenditure which society must incur in order to make use of it. Thus, where it is possible to define units of quantity for non-market services, it is also possible to apply the general principles for calculating volume and price indices which are outlined above.

It is generally possible to define units of quantity for non-market services which are consumed on an individual basis, such as education and health services, which means that the general principles must be routinely applied in the case of such services.

The method consisting of calculating volume by applying unit costs of the previous year to the

[1] Eurostat, ***Handbook on price and volume measures in national accounts***, 2001 (available on: http://epp.eurostat.ec.europa.eu).

quantities of the current year is called the output method.

10.30 It is difficult, however, to define units of quantity for collective non-market services, such as services in connection with general government, justice or defence. In this case, therefore, other methods need to be used by analogy with the general method. This method defines volume on the basis of prices of the previous year, i.e. it defines volume as the expenditure which purchasers would have incurred if prices had not changed. This latter definition may be used when it is not possible to define a unit of quantity provided that it is applied, not to a unit of product, but to the expenditure as a whole. Since the value of a non-market service is determined by the costs involved, it is thus possible to calculate the volume by the value of the costs at base period prices, i.e. by the value at base period prices of intermediate consumption, compensation of employees, other taxes net of production subsidies and consumption of fixed capital. This method is known as the input method. The calculation in volume terms of the compensation of employees, consumption of fixed capital, taxes and subsidies on production is covered in the paragraphs which follow.

Even in the most favourable case of non-market services consumed on an individual basis, such as those of education and health, it is not always easy to distinguish homogeneous products. Indeed, the characteristics of such services are seldom defined in a sufficiently precise way for it to be possible to determine with certainty whether two different service units can be considered as being equivalent, i.e. if they have to be regarded as correspondent with one same homogeneous product or with two separate products. Two equivalence criteria can be retained by the national accountants.

(a) The unit cost criterion: two units of non-market services being considered equivalent if they have the same unit cost. This criterion is based on the idea that, collectively, those who benefit from public services are also those who decide and pay for them. For example, citizens decide on public services via their representatives and pay for them by their taxes. Under such conditions, citizens cannot be expected to pay different prices for service units that they consider equivalent. Thus, according to this criterion, two service units of different cost have to be regarded as corresponding to different products, and a non-market homogeneous product is characterised by the unicity of its unit cost.

(b) The outcome criterion: two units of non-market services being considered equivalent if they give the same outcome. This criterion is based on the idea that two service units considered by citizens to be equivalent can however be produced at different costs because citizens do not check completely the production process of the services. The unit cost criterion is no longer then relevant and has to be replaced by a criterion corresponding to the usefulness of the non-market services for society.

As the outcome criterion often seems more relevant, a large amount of work has been completed to develop methods based on this criterion and research to improve them continues. In practice, such methods often result in the introduction to the volume calculation of correction coefficients applied to quantities; they take then the name of methods with explicit correction for quality.

The principal difficulty of implementation of such methods is related to the definition and the measurement of outcome. Indeed, measuring outcome presupposes having defined objectives, which is not so simple in the field of non-market services. For example, what are the objectives of the public health service: improving the state of public health or extending lifetime? Certainly the two, but then how are various objectives weighed up when they are not equivalent? For example, what is the best treatment, that which makes it possible to live an additional year in good health or that which makes it possible to live two additional years in bad health? In addition, outcome estimates are often controversial, hence, in numerous countries, the controversies on improvement or deterioration of pupils' school performance are recurrent.

In the European Union, given the conceptual difficulties and the absence of consensus on output methods adjusted for quality (based on outcome), such methods are excluded from the central framework in order to preserve the comparability of the results. Such methods are reserved on an optional basis for supplementary tables, while continuing research. Thus, in the field of non-market health and education, the estimates of production and of consumption in volume terms have to be calculated on the basis of direct output measures — not adjusted for quality — by weighing up the quantities produced by the previous year unit costs of those services, without applying any correction to them in order to take account of quality. Such methods have to be applied to a sufficient level of detail, the minimum level being defined by Eurostat's *Handbook on price and volume measures in national accounts*.

Although the use of input-based methods is generally to be avoided, it is possible, in the field of health, to apply the input method when the variety of the services is such that it is practically impossible to determine homogeneous products. In addition, explanatory information has to accompany the national accounts estimates that draw users' attention to the methods of measurement.

Principles for value added and GDP

10.31 Value added, the balancing item in the production account, is the only balancing item to form part of the integrated system of price and volume indices. The very special characteristics of this item must, however, be emphasised, as must the significance of its related volume and price indices.

Unlike the various flows of goods and services, value added does not represent any single category of transactions. It cannot, therefore, be directly broken down into a price component and a volume component.

10.32 *Definition:* value added in volume terms is defined as the difference between output in volume terms and intermediate consumption in volume terms.

$$VA = \Sigma\, P(0)\, Q(1) - \Sigma p(0)\, q(1)$$

where P and Q are prices and quantities for output and p and q are prices and quantities for intermediate consumption. The theoretically correct method to calculate value added in volume terms is by double deflation, i.e. deflating separately the two flows of the production account (output and intermediate consumption) and calculating the balance of those two revalued flows.

10.33 In some cases, where the statistical data remain incomplete or insufficiently reliable, it may be necessary to use a single indicator. If there are good data on value added at current prices, one alternative to double deflation is to deflate current value added directly by a price index for output. This implies the assumption that prices for intermediate consumption change at the same rate as for output. Another possible procedure is to extrapolate value added in the base year by a volume index for output. This volume index can be calculated either directly from quantity data or by deflating the current value of output by an appropriate price index. This method in fact assumes that the volume changes are the same for outputs and for intermediate consumption.

For certain market and non-market service industries, such as finance, business services or defence, it may not be possible to obtain satisfactory estimates of price or volume changes for output. In such cases the movements of value added in volume terms can be estimated by means of changes in compensation of employees at wage rates of the previous year and consumption of fixed capital in volume terms. Compilers of data may be forced to adopt such expedients, even when there is no good reason to assume that labour productivity remains unchanged in the short or long term.

10.34 By their very nature, therefore, the indices of volume and price for value added are different from the corresponding indices for the flows of goods and services.

The same applies to price and volume indices of aggregate balancing items such as gross domestic product. The value of the latter is equivalent to the sum of all the values added of all industries, i.e. to an addition of balancing items, plus taxes less subsidies on products and from another point of view can be seen to represent the balancing item between total final uses and imports.

Specific problems in the application of the principles

10.35 Although essentially limited to transactions involving goods and services, the integrated system of price and volume indices does not exclude the possibility of calculating measures of changes in price and volume for certain other transactions.

Taxes and subsidies on products and imports

10.36 The possibility mentioned above exists, in particular, in the case of taxes and subsidies directly linked to the quantity or value of the goods and services which are the subject of certain transactions. In the supply and use tables, the values of those taxes and subsidies are shown explicitly. By applying the rules described below, it is possible to obtain price and volume measures for the categories of taxes and subsidies which are recorded in the goods and services accounts, namely:

(a) taxes on products, excluding VAT (D.212 and D.214);

(b) subsidies on products (D.31);

(c) VAT on products (D.211).

10.37 The simplest case is that of taxes which represent a fixed amount per unit of quantity of the product which is the subject of the transaction. The value of the revenue from such a tax depends upon:

(a) the quantity of products involved in the transaction;

(b) the amount levied per unit, i.e. the taxation price.

The breakdown of the value change into its two components presents virtually no difficulties. The variation in volume is determined by the change in the quantities of products taxed; the price variation corresponds to the change in the amount levied per unit, i.e. to the change in the taxation price.

10.38 A more frequent case is that in which the tax represents a certain percentage of the value of the transaction. The value of the revenue from such a tax then depends upon:

(a) the quantity of products involved in the transaction;

(b) the price of the products involved in the transaction;

(c) the tax rate (as a percentage).

The taxation price is then obtained by applying the rate to the price of the product. The change in value of the revenue from a tax of this type can also be divided into a volume change, determined by the change in the quantities of products taxed, and a price change corresponding to the change in the taxation price (b × c).

10.39 The amount of taxes on products, excluding VAT (D.212 and D.214) is measured in terms of volume by applying to the quantities of products produced or imported the taxation prices of the base year or by applying to the value of output or imports, revalued at the prices of the base year, the tax rates of the base year. Attention has to be paid to the fact that taxation prices may differ among different uses. This is taken into account in the supply and use tables.

10.40 Similarly, the amount of subsidies on products (D.31) is measured in terms of volume by applying to the quantities of products produced or imported the subsidy prices of the base-year or by applying to the value of output or imports, revalued at the prices of the base-year, the rates of subsidy of the base-year, taking into account different subsidy prices for different uses.

10.41 VAT on products (D.211) is, both for the whole economy and for individual industries and other users, calculated on a net basis and refers only to non-deductible VAT. This is defined as the difference between VAT invoiced on the products and VAT deductible by the users of these products. Alternatively, it is also possible to define VAT on products as the sum of all non-deductible amounts which have to be paid by users.

Non-deductible VAT in volume terms can be calculated by applying the VAT rates in force in the previous year to the flows expressed in the prices of the previous year. Any change in the rate of VAT for the current year will therefore be reflected in the price index and not in the volume index of non-deductible VAT.

The fraction of deductible VAT in invoiced VAT and hence non-deductible VAT may change:

(a) either because of a change in the right to deduct VAT, resulting from a change in tax laws or regulations, taking effect with or without a time lag;

(b) or because of changes in the pattern of uses of the product (e.g. increase in the proportion of uses on which VAT may be deducted).

A change in the amount of deductible VAT resulting from a change in the right to deduct VAT will, by the method described, be treated as a change in the taxation price, as will a change in the rate of invoiced VAT.

On the other hand, a change in the amount of deductible VAT resulting from a change in the pattern of uses of the product constitutes a change in the volume of deductible VAT to be reflected in the index of the volume of VAT on products.

Other taxes and subsidies on production

10.42 The treatment of other taxes (D.29) and subsidies (D.39) on production raises a particular difficulty, to the extent that, by definition, it is not possible to assign them directly to units which are produced. In the case of non-market services, this difficulty is compounded by the fact that they are used only when it is not possible to define units of quantity. However, it is generally possible to get around this difficulty by defining other taxes and subsidies on production in volume terms, by the amount to which they would have risen if there had been no change in the tax rules and prices as a whole in relation to the previous year. For example, taxes on property or the use of an asset can be evaluated in volume terms by applying to the current period the rules and the price of assets of the previous year.

Consumption of fixed capital

10.43 The calculation of volume measures of the consumption of fixed capital poses few problems when good data on the composition of the stock of fixed capital goods are available. The perpetual inventory method, used by most countries, already implies, for the estimation of the consumption of fixed capital at current prices, the need to firstly carry out a calculation of the stock of fixed capital goods in volume terms. To go from a valuation at historic cost to one at replacement cost, it is necessary firstly to value capital goods acquired over a number of different periods on a homogeneous basis, i.e. base-year prices. The price and volume indices derived in the process can therefore be used to calculate the value of the consumption of fixed capital in volume terms and the associated price index.

Where there is no perpetual inventory of the stock of fixed capital goods, the change in the consumption of fixed capital in volume terms can be obtained by deflating the current price data by price indices derived from data on gross fixed capital formation by product. Account has then to be taken of the age structure of the capital goods acquired.

Compensation of employees

10.44 For the purpose of measuring the volume of input from employee labour, the quantity unit for compensation of employees may be considered to be an hour's work of a given type and level of skill. As with goods and services, different qualities of work must be recognised and quantity relatives calculated for each separate type of work. The price associated with each type of work is the compensation paid per hour, which may vary, of course, between different types of work. A volume measure of work done may be calculated as a weighted average of the quantity relatives for different kinds of work, weighted by the values of compensation of employees in the previous year or fixed base year. Alternatively, a wage rate index may be calculated for work by calculating a weighted average of the proportionate changes in hourly rates of compensation for different types of work, again using compensation of employees as weights. If a Laspeyres type of volume index is calculated indirectly by deflating the changes in compensation of employees at current values by an index of the average change in hourly compensation, the latter should be a Paasche-type index.

Stocks of produced fixed assets and inventories

10.45 Volumes at the prices of the previous year are needed both for stocks of produced fixed assets and for inventories. For the former, such data as are necessary for the calculation of capital output ratios are available if use is made of the perpetual inventory method. In other cases information on the values of stocks of assets may be collected from producers and deflation made by the price indices used for fixed capital formation, taking into account the age structure of stocks.

Changes in inventories are measured by the value of entries to inventories less the value of withdrawals from inventories, and the value of any recurrent losses of goods held in inventories during a given period. Volumes at the prices of the previous year can be derived by the deflation of these components. In practice, however, it is rare for entries and withdrawals of stocks to be actually known, and often the only available information is the value of the stocks at the start and at the end of the period. In such cases, it will often be necessary to assume regular entries and withdrawals during the current period, so that the average price for the period can be considered relevant for both entries and withdrawals. In such circumstances, calculating the variation in stocks by the difference between the values of the entries and withdrawals amounts to the same as calculating the difference between the values of the initial and final stocks. The variation in stocks in volume terms can then be calculated by deflating the initial and final stocks to bring them in line with the average price of the base period. When the variations in stocks are known in quantity terms, it is possible, again assuming regular entries and withdrawals, to calculate the volume of the variation in stocks by applying the average price of the base period to the variation in stocks in quantity terms.

Measures of real income for the total economy

10.46 It is generally not possible to divide income flows into a price and a quantity component and for this reason price and volume measures cannot be defined in the same way as for the flows and stocks of products. Income flows can be measured in real terms only if one chooses some selected basket of goods and services on which the income is typically spent and uses the price index for this basket as a deflator of current incomes. The choice is always arbitrary in the sense that income is seldom spent specifically for purchases during the period in question. Some of it may be saved for purchases in later periods or, alternatively, the purchases during the period may be partly financed from savings made earlier.

10.47 Gross domestic product at previous year prices measures the total production (less the intermediate consumption) in volume terms for the total economy. The total real income of residents is influenced not only by this volume of production but also by the rate at which exports can be traded against imports from the rest of the world. If the terms of trade improve, fewer exports are needed to pay for a given volume of imports, so that at a given level of domestic production goods and services can be reallocated from exports to consumption or capital formation.

Real gross domestic income can be derived by adding the so-called trading gain to volume figures on gross domestic product. The trading gain or, as the case may be, loss is defined as:

$$T = \frac{X-M}{P} - \left[\frac{X}{P_x} - \frac{M}{P_m}\right]$$

i.e. the current balance of exports less imports, deflated by a price index P, less the difference between the deflated value of exports and the deflated value of imports. The choice of an appropriate deflator P for the current trade balances should be left to the statistical authorities in a country, taking account of the particular circumstances of that country. In circumstances in which there is uncertainty about the choice of deflator an average of the import and the export price indices is likely to provide a suitable deflator.

Various real income aggregates are identified and defined in the way shown as follows:

gross domestic product in volume terms

plus	the trading gain or loss from changes in terms of trade
equals	real gross domestic income
plus	real primary incomes receivable from abroad
minus	real primary incomes payable to abroad
equals	real gross national income
plus	real current transfers receivable from abroad

minus real current transfers payable to abroad

equals real gross national disposable income

minus consumption of fixed capital in volume terms

equals real net national disposable income.

To be able to express the various national income aggregates in real terms, it is recommended that receivables and payables of primary incomes and transfers to and from abroad should be deflated with an index of gross domestic final expenditure. Real national disposable income is to be expressed on a net basis by deducting from its gross value the consumption of fixed capital in volume terms.

Interspatial price and volume indices

10.48 The fact that countries have different price levels and currencies poses a challenge to interspatial comparisons of prices and volumes. Nominal exchange rates are not suitable conversion factors in such comparisons, because they do not adequately reflect price level differences, and because they are not sufficiently stable over time.

10.49 Instead, purchasing power parities (PPPs) are applied. A PPP is defined as the number of units of country B's currency that is needed in country B in order to purchase the same quantity of goods and services that one unit of country A's currency will purchase in country A. PPPs can thus be interpreted as the exchange rate of an artificial currency commonly referred to as the purchasing power standard (PPS). If the expenditures of countries A and B expressed in national currencies are converted into PPS, the resulting figures are expressed in the same price level and the same currency, allowing a meaningful comparison of volumes.

10.50 PPPs for market goods and services are based on international price surveys. Such price surveys are carried out simultaneously in all participating countries, based on a common product sample. The sample items are clearly specified in terms of their technical characteristics, as well as other variables that are assumed to influence the price, like installation costs and the terms of sale. While priority is given to the comparability of the sample items, this must nevertheless be weighted against their representativity in national markets. The product sample should ideally be equally representative in all participating countries.

10.51 For non-market services, interspatial comparisons face the same problem as intertemporal ones, since no market prices exist in either dimension. Traditionally, an input approach (or an input cost approach) has been applied, under the assumption that output equals the sum of inputs. This approach, which implies direct or indirect volume comparisons of inputs, fails to take differences in productivity into account. For this reason, as for intertemporal comparisons, methods are preferred which focus either on the direct measurement of output or on output prices which are subsequently used to deflate expenditure, at least for individual services such as education and health.

10.52 In the calculation of PPPs, the same index number formulae are applied as in the calculation of temporal indices. In a bilateral context involving two countries, A and B, either country can be used to give the weights. Viewed from the angle of country A, a Laspeyres-type index with weights from country A can be calculated as well as a Paasche-type index using weights from country B. However, if the two economies are structurally different, the spread between these two indices may be quite large, and the end result would be heavily influenced by the choice of index. In binary comparisons, it is thus preferable to apply the average of the two, that is, a Fisher index.

10.53 Explicit numerical weights are usually not available at the level of individual sample items. Therefore, a form of implicit weighting is applied, based on whether countries regard a particular item as representative of the domestic consumption pattern or not. The lowest level of aggregation for which numerical weights are available, is referred to as the basic heading (BH) level.

10.54 Transitivity implies that the direct PPP between countries A and C is equal to the indirect PPP derived by multiplying the direct PPP between countries A and B (or any other third country) and the direct PPP between countries B and C. The Fisher PPPs at BH level are not transitive, but it is possible to derive from them a set of transitive PPPs that resemble the original Fisher indices, using the criterion of least squares for this purpose. Applying the so-called Éltetö-Köves-Szulc (EKS) formula minimises the deviations between the original Fisher indices and produces a complete set of transitive PPPs at BH level.

10.55 The resulting set of transitive PPPs for all countries and all BHs are aggregated up to the level of total GDP using expenditures from national accounts as weights. The aggregate PPPs at the level of GDP or any other category can be applied in, for instance, the calculation of real expenditures and spatial volume indices. A PPP divided by the nominal exchange rate between two countries produces a price level index (PLI), that can be used in analyses of countries' comparative price levels.

10.56 The European Commission (Eurostat) is responsible for calculating PPPs for the Member States in accordance with Regulation (EC) No 1445/2007[2]. In practice, these PPP calculations are embedded in a wider PPP program coordinated jointly by Eurostat and OECD. The detailed methods used in the program are described in the *Eurostat-OECD Methodological manual on purchasing power parities*[3].

[2] Regulation (EC) No 1445/2007 of the European Parliament and of the Council of 11 December 2007 establishing common rules for the provision of basic information on Purchasing Power Parities and for their calculation and dissemination (OJ L 336, 20.12.2007, p. 1).

[3] Eurostat-OECD, *Eurostat-OECD Methodological manual on purchasing power parities*, 2006 (available on: http://epp.eurostat.ec.europa.eu).

CHAPTER 11

Population and labour inputs

11.01 Comparisons between countries, or between industries or sectors within the same economy, are more useful for some purposes when aggregates in the national accounts (for example, gross domestic product, the final consumption of households, the value added of an industry, compensation of employees) are considered in relation to the number of inhabitants and labour input variables. For such cases, definitions of population and labour inputs must be consistent with the concepts used in national accounts, and reflect the production boundary of national accounts.

11.02 The aim of this Chapter is to describe the frameworks and measures of population and employment statistics, and to provide guidance to the extent those frameworks correspond to the system of national accounts.

11.03 Labour inputs are classified on the basis of the same statistical units as used for the analysis of production, namely the local kind-of-activity unit and the institutional unit.

11.04 The aggregates to which the figures for population and labour inputs are related are often annual totals. In such cases, average population and labour inputs during the year have to be used. When surveys are conducted several times during the course of the year, the figure taken is the average of the results obtained on those various dates. When a survey is carried out over a period within the year, the period used must be representative; the latest available information on variations throughout the year must be used in estimating data for the year as a whole. For example, when estimating average employment, allowance must be made for the fact that certain people do not work throughout the whole year, for example casual workers and seasonal workers.

Total population

11.05 *Definition:* on a given date, the total population of a country consists of all persons, national or foreign, who are permanently settled in the economic territory of the country, even if they are temporarily absent from it. An annual average of head counts will provide an appropriate basis for estimating national accounts variables or for use as a denominator in comparisons.

11.06 Total population is defined for national accounts according to the concept of residence as described in Chapter 2. A person who is staying, or intends to stay, on the economic territory of the country for a period of one year or more is regarded as permanently settled there. A person is regarded as being temporarily absent if he or she is permanently settled in the country but is staying, or intends to stay, in the rest of the world for a period of less than one year. All individuals who belong to the same household are resident where the household has a centre of predominant economic interest: this is where the household maintains a dwelling, or succession of dwellings, which members of the household treat, and use, as their principal residence. A member of a resident household continues to be a resident even if that individual makes frequent journeys outside the economic territory because their centre of economic interest remains in the economy in which the household is resident.

11.07 The total population of a country includes:

(a) nationals settled in the country;

(b) national civilians who are staying abroad for a period of less than one year. Examples are frontier workers, seasonal workers, and tourists;

(c) foreign civilians settled in the country for a period of one year or more, including the personnel and accompanying members of their households, of the institutions of the European Union and of international civilian organisations located within the geographic territory of the country;

(d) foreign military personnel working with international military organisations located within the geographic territory of the country;

(e) foreign technical assistance personnel on long-term assignments who work in the country for over a year, and are deemed to be employed by their host government on behalf of the government, or international organisation, which is financing their work.

The total population also includes the following, irrespective of the length of their stay outside the country:

(a) national students however long they study abroad;

(b) members of the country's armed forces stationed in the rest of the world;

(c) nationals who are on the staff of national scientific bases established outside the geographic territory of the country;

(d) nationals who are on the staff of diplomatic missions abroad;

(e) nationals who are members of the crews of fishing boats, other ships, aircraft and floating platforms operating outside the economic territory;

(f) patients taking medical treatment abroad.

11.08 Conversely, the total population of a country does not include:

(a) foreign civilians staying on the territory for less than a year, such as frontier workers, seasonal workers, tourists, and patients;

(b) national civilians staying abroad for a period of one year or more;

(c) national military personnel working with international organisations located in the rest of the world;

(d) national technical assistance personnel on long-term assignments who work abroad and are deemed to be employed by their host government on behalf of the government, or international organisation, which is financing their work;

(e) foreign students however long they study in the country;

(f) members of the armed forces of a foreign country who are stationed in the country;

(g) the foreign personnel of foreign scientific bases located on the geographic territory of the country;

(h) members of foreign diplomatic missions stationed in the country.

11.09 The definition of population given above differs from the present, or de facto, population, which consists of persons actually present on the geographic territory of a country at a given date. It also differs from the registered population.

Economically active population

11.10 *Definition:* the economically active population comprises all persons, who provide, or are available to provide, the supply of labour for productive activities falling in the production boundary of national accounts. It includes all persons who fulfil the requirements for inclusion in employment or in unemployment as subsequently defined.

The relevant standards on labour force statistics are maintained by the International Labour Organisation (ILO). The ILO standards are contained in 'Resolutions', which are adopted by sessions of the International Conference of Labour Statisticians (ICLS). The one most relevant to collecting and compiling labour force data is the Resolution concerning statistics of the economically active population, employment, unemployment and underemployment[1]. This resolution was adopted by the 13th International Conference of Labour Statisticians in October 1982, and amended by resolution of the Eighteenth ICLS in December 2008. In that resolution the labour force is defined in terms of individuals engaged in an activity

[1] http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_087481/lang–en/index.htm

included within the national accounts production boundary.

Employment

11.11 *Definition:* employment covers all persons engaged in productive activity that falls within the production boundary of the national accounts.

Persons in employment are employees or self-employed persons. Persons holding more than one job are classified as employees or self-employed according to their main job.

Employees

11.12 *Definition:* employees are defined as persons who, by agreement, work for a resident institutional unit and receive a remuneration recorded as compensation of employees.

'Employees' correspond to the ILO definition of 'paid employment'. The relationship of employer to employee exists when there is a contract, which may be formal or informal, between an enterprise and a person, entered into voluntarily by both parties, whereby the person works for the enterprise in return for remuneration in cash or in kind.

Persons having both a job as an employee and a job as a self-employed person are classified as an employee if the employee job constitutes their principal activity by income. If income is not available, then hours worked is to be used as a proxy.

11.13 The following categories of employees are included:

(a) persons engaged by an employer under a contract of employment. Examples are manual and non-manual workers, management personnel, domestic staff, and people carrying out remunerated productive activity under employment programs;

(b) civil servants and other government employees whose terms and conditions of employment are laid down by public law;

(c) the armed forces, consisting of those who have voluntarily enlisted for both long and short engagements, and conscripts including conscripts working for civil purposes;

(d) ministers of religion, if they are paid directly by general government or a non-profit institution;

(e) owners of corporations and quasi-corporations if they work in those enterprises;

(f) students who have a formal commitment whereby they contribute some of their own labour as an input to an enterprise's process of production in return for remuneration in cash or in kind as education services;

(g) outworkers if there is an explicit agreement that the outworker is remunerated on the basis of the work done: that is, the amount of labour which is contributed as an input into some process of production; an outworker is an employee if their contract with the employer is essentially to provide labour;

(h) persons employed by temporary employment agencies, who are to be included in the industry of the agency which employs them, and not in the industry of the enterprise for which they actually work.

11.14 Persons temporarily not at work are also considered as employees provided they have a formal job attachment. This formal attachment shall be determined according to one or more of the following criteria:

(a) the continued receipt of a wage or salary;

(b) an assurance of a return to work following the end of the contingency, or an agreement as to the date of return.

This covers persons temporarily not at work because of illness or injury, holiday or vacation, strike or lockout, educational or training leave, maternity or parental leave, reduction in economic activity, temporary disorganisation or suspension of work due to reasons such as: bad weather, mechanical or electrical breakdown, or shortage of raw materials or fuels. It also covers other temporary absences with or without leave.

Self-employed persons

11.15 *Definition:* self-employed persons are defined as persons who are the sole owners, or joint owners, of the unincorporated enterprises in which they work, excluding those unincorporated enterprises that are classified as quasi-corporations. Persons having both an employee job and a job as a self-employed person are classified here if the self-employed job constitutes their principle activity by income.

If income is not readily available, then hours worked may be used as a proxy.

Self-employed persons may be temporarily not at work during the reference period. The compensation for self-employment is mixed income.

11.16 Self-employed persons include the following categories:

(a) unpaid family workers, including those working in unincorporated enterprises engaged in market production;

(b) outworkers whose income is a function of the value of the outputs from some process of production for which they are responsible. The contract of those outworkers is to provide goods or services to the commissioning party;

(c) workers engaged in production undertaken entirely for their own final consumption or own capital formation, either individually or collectively. Such production must be a significant part of their final use for it to be recorded.

Unpaid voluntary workers are included with self-employed persons if their volunteer activities result in goods; for example the construction of a dwelling, church or other building. But if their volunteer activities result in services, for example care-taking or cleaning without payment, they are not included under employment, because those volunteer services are excluded from production.

Although the services householders provide to themselves as owners of their dwellings are included within the national accounts production boundary, there is no labour input in the production of such services; owner-occupiers of dwellings are not considered as self-employed persons.

Employment and residence

11.17 The results of the activity of producer units are consistent in coverage with employment if the latter includes both the residents and the non-residents who work for resident producer units.

Employment, therefore, also includes the following categories:

(a) non-resident border workers, i.e. persons who cross the border each day to work in the economic territory;

(b) non-resident seasonal workers, i.e. persons who move into the economic territory and stay there for less than one year in order to work in industries which periodically require additional labour;

(c) members of the country's armed forces stationed in the rest of the world;

(d) nationals who are on the staff of national scientific bases established outside the geographic territory of the country;

(e) nationals who are on the staff of diplomatic missions abroad;

(f) members of the crews of fishing boats, other ships, aircraft and floating platforms operated by resident units;

(g) local employees of general government bodies situated outside the economic territory.

11.18 The following categories are excluded from employment:

(a) residents who are border workers or seasonal workers, i.e. who work in another economic territory;

(b) nationals who are members of the crews of fishing boats, other ships, aircraft and floating platforms operated by non-resident units;

(c) local employees of foreign government agencies located on the geographic territory of the country;

(d) the personnel of the institutions of the European Union and international civilian organisations located within the geographic territory of the country (including local employees directly recruited);

(e) members of armed forces working with international military organisations located on the geographic territory of the country;

(f) nationals working in foreign scientific bases established in the economic territory.

11.19 In order to be able to make the transition to the concepts generally used in labour force statistics (employment on a national basis), the ESA specially provides for the following items to be shown separately:

(a) the conscripted forces (not included in the labour force statistics, but included in the ESA under general government services);

(b) residents working for non-resident producer units (included in labour force statistics but not included in employment as defined in the ESA);

(c) non-residents working with resident producer units (not included in labour force statistics but included in employment as defined in the ESA);

(d) resident workers living permanently in an institution;

(e) resident workers under the age taken into account in labour force statistics.

Unemployment

11.20 *Definition:* in accordance with the guidelines established by the International Labour Organization (13th International Conference of Labour Statisticians), further specified in the European Union context by Commission Regulation (EC) 1897/2000[2], the concept of unemployment comprises all persons above a specified age who during the reference period were:

(a) 'without work', i.e. not in paid employment or self-employment;

(b) 'currently available for work', i.e. were available for paid employment or self-employment during the reference period; and

(c) 'seeking work', i.e. had taken specific steps in a specified recent period to seek paid employment or self-employment.

11.21 The specific steps may include: registration at a public or private employment exchange; application to employers; checking at worksites, farms, factory gates, markets or other assembly places; placing or answering newspaper advertisements; seeking assistance of friends or relatives; looking for land, building, machinery or equipment to establish own enterprise; applying for permits and licences or financial resources, etc.

Jobs

11.22 *Definition:* a job is defined as an explicit or implicit contract between a person and a resident institutional unit to perform work in return for compensation for a defined period or until further notice.

This definition covers the following terms:

(a) the explicit or implicit contract relates to the provision of labour input, not to supplying output of a good or service;

(b) work means any activity which contributes to the production of goods and services within the production boundary. The legality of the work and the age of the worker are irrelevant;

(c) compensation is to be interpreted here in a wide sense, including mixed income of self-employed persons.

In this definition of a job, both employee and self-employment jobs are covered; that is, an employee job if the person belongs to another institutional unit than the employer and a self-employment job if the person belongs to the same institutional unit as the employer.

11.23 The concept of jobs differs from the concept of employment as defined above.

(a) Jobs include second, third, etc. jobs of the same person. Those second, third, etc. jobs of a person may either successively follow one another

[2] Commission Regulation (EC) 1897/2000 of 7 September 2000 implementing Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community concerning the operational definition of unemployment (OJ L 228, 8.9.2000, p. 18).

within the reference period (usually, a week) or, as when someone has an evening job as well as a daytime job, run in parallel.

(b) On the other hand, jobs exclude persons temporarily not at work but who have a 'formal attachment to their job' in the form, for instance, of 'an assurance of return to work or an agreement as to the date of return'. Such an understanding between an employer and a person on lay-off or away on training is not counted as a job in the system.

Jobs and residence

11.24 A job in the economic territory of the country is an explicit or implicit contract between a person (who may be resident in another economic territory) and an institutional unit resident in the country.

For measuring labour input to domestic economic activity, only the residence of the producer institutional unit is relevant, because resident producers alone contribute to gross domestic product.

11.25 Moreover:

(a) jobs are included in the count of jobs in the economic territory when the employees of a resident producer are working temporarily in another economic territory and when the nature and duration of the activity do not warrant its treatment as a notional resident unit of that other territory;

(b) jobs are excluded from the count of jobs in the economic territory when performed for non-resident institutional units, that is, for units with a centre of interest in another country which have no intention of being active on the domestic territory for a year or more;

(c) the jobs of the staff of international organisations and those of locally recruited staff engaged by foreign embassies are excluded from the count, since the employing units are not resident.

The non-observed economy

11.26 Value of production activities that are not directly observed are, in principle, included within the national accounts production boundary. The following three types of activity are therefore included:

(a) illegal activities where the parties are willing partners in an economic transaction;

(b) hidden and underground activities where the transactions themselves are not against the law, but are unreported to avoid official scrutiny;

(c) activities described as 'informal', typically where no records are kept.

In principle, the remuneration of these workers is included in compensation of employees or mixed income. This adjustment is to be taken into account in the data on employment and self-employment when calculating ratios and other statistics.

Illegal activities where either of the parties are not willing participants (e.g. theft) are not economic transactions and so are not included in the production boundary.

Total hours worked

11.27 *Definition:* total hours worked represents the aggregate number of hours actually worked as an employee or self-employed person during the accounting period, when their output is within the production boundary.

Given the broad definition of employees which covers persons temporarily not at work but with a formal attachment, and part-time workers, the appropriate measure for productivity calculation is not a head count but total hours worked.

Total hours worked is the most appropriate measure of labour inputs for the national accounts.

Specifying hours actually worked

11.28 Total hours actually worked represents those hours of labour that have contributed to production and can be defined with reference to the production boundary of national accounts. The ILO standard contained in the Resolution concerning the measurement of working time, adopted by the 18th ICLS in December 2008[3], defines hours actually worked as the time persons spend in the performance of activities that contribute to the production of goods and services during a specified reference period. The resolution defines hours worked as follows:

(1) hours actually worked occur in all types of jobs under varying work and compensation arrangements paid or unpaid, that can be performed at all types of location;

(2) hours actually worked are not linked to administrative or legal concepts and therefore apply to all working persons and may occur within normal or contractual hours or as overtime;

(3) statistics for hours actually worked shall include:

(a) hours actually worked during normal periods of work and directly contributing to production;

(b) paid time spent on training;

(c) time worked in addition to hours worked during normal periods of work, known as overtime. Note that overtime hours worked shall be included even if they are unpaid;

(d) time spent working on tasks such as the preparation of the workplace, repairs and maintenance, preparation and cleaning of tools, and the preparation of receipts, time sheets and reports;

(e) time spent waiting or standing-by during short-term disruptions during the workday for such reasons as lack of supply of work, breakdown of machinery, or accidents, or time spent at the place of work during which no work is done but for which payment is made under a guaranteed employment contract;

(f) time corresponding to short periods of rest during the workday, including tea and coffee breaks;

(g) on-call work arrangements. Where this occurs away from the work-place, for example at home, the time is included in hours actually worked according to the degree to which the person's non-work activities and movements are restricted;

(h) hours worked by defence force personnel, including conscripts, shall be included even if they are outside the scope of a country's labour force survey;

(4) statistics for hours actually worked shall exclude:

(a) hours paid for but not worked, such as paid annual leave, paid public holidays, paid sick leave, parental leave, strikes, 'short leave' for medical visits etc., bad weather shutdowns;

(b) meal breaks;

(c) time spent on travel between home and work, although any work undertaken while commuting shall be included;

(d) education other than training.

More exhaustive definitions of these criteria can be found in the ICLS Resolution concerning the measurement of working time of December 2008[4].

11.29 Total hours worked is the aggregate number of hours actually worked during the accounting period in employee and self-employment jobs within the economic territory:

(a) including work outside the economic territory for resident employer institutional units who have no centre of economic interest there;

(b) excluding work for foreign employer institutional units who have no centre of economic interest within the economic territory.

11.30 Many surveys of enterprises record hours paid not hours worked. In those cases, hours worked have to be estimated for each job group, using whatever information is available about paid leave etc.

11.31 For business cycle analysis, it may be useful to adjust total hours worked by adopting a standard number of working days per year.

Full-time equivalence

11.32 *Definition:* full-time equivalent employment, which equals the number of full-time equivalent jobs, is defined as total hours worked divided by the average annual number of hours worked in full-time jobs within the economic territory.

3 http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang--en/index.htm

4 http://www.ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_112455/lang--en/index.htm

11.33 This definition does not necessarily describe how the concept is estimated: since the length of a full-time job has changed through time and differs between industries, methods which establish the average proportion and average hours of less than full-time jobs in each job group are used. A normal full time week must first be estimated in each job group. A job group can be defined, inside an industry, according to gender and kind of work. Hours contractually agreed upon constitute, for employee jobs, the appropriate criteria for determining those figures. The full-time equivalent is calculated separately in each job group, then summed up.

11.34 Total hours worked are the best measure of labour inputs, but where this information is lacking, full-time equivalence may be the best available proxy; it can be estimated more easily and enables international comparisons with countries which can only estimate full-time equivalent employment.

Employee labour input at constant compensation

11.35 *Definition:* for labour inputs of similar type and qualifications in the base period, employee labour input at constant compensation measures current labour inputs valued at the levels of compensation of employee jobs ruling during a selected base period.

11.36 Compensation of employees at current prices divided by employee labour input at constant compensation yields an implicit compensation price index comparable with the implicit price index of final uses.

11.37 The purpose of the concept of employee labour input at constant compensation is to describe the changes in the composition of the work force, for example from lower paid to higher paid workers. To be effective, the analysis is to be undertaken on an industry basis.

Productivity measures

11.38 *Definition:* productivity is a measure of output from a production process, per unit of input. For example, labour productivity is typically measured as a ratio of output per labour-hour (an input). It is therefore essential that labour measures used in studies where the output is based on national accounts measures are consistent in concept and coverage with the national accounts.

CHAPTER 12

Quarterly national accounts

Introduction

12.01 This Chapter sets out the major principles and characteristics of quarterly national accounts.

12.02 Quarterly national accounts are national accounts whose reference period is a quarter. They are a system of integrated quarterly indicators. Quarterly national accounts provide a comprehensive accounting framework within which economic data can be compiled and presented in a format that is designed for purposes of economic analysis, decision-taking and policymaking, on a quarterly basis.

12.03 Quarterly national accounts adopt the same principles, definitions, and structure as annual national accounts. Quarterly national accounts use the concepts of annual national accounts unless indicated otherwise in this Chapter.

12.04 Quarterly national accounts cover the entire sequence of accounts and balance sheets. In practice, the constraints of data availability, time, and resources mean that quarterly national accounts are less complete than annual national accounts.

In comparison to annual national accounts, quarterly national accounts are more limited in scope. They focus on measuring GDP, on measuring the supply and use of goods and services, and on the generation of income. There is limited detail on industry activity and specific transactions. This reflects a trade-off between timeliness and scope, detail and reliability.

12.05 Compared to annual national accounts, quarterly national accounts are compiled and released more frequently. They provide an early overview of economic developments and can be used for early estimates of annual national accounts.

12.06 The time series of quarterly national accounts statistics, due to their quarterly frequency, present a seasonal pattern and are affected by calendar events. The seasonal pattern is smoothed out through seasonal and calendar adjustment procedures.

12.07 Quarterly national accounts rely on more limited data sources than annual national accounts and their compilation requires more use of statistical and econometric techniques. There are two approaches to the compilation of quarterly national accounts: the direct approach and the indirect approach.

12.08 The direct approach is based on the availability, at quarterly intervals, of similar data sources as those used to compile annual accounts; under this approach, similar methods of compilation are applied. The indirect approach uses statistical and econometric estimation techniques that use information from the annual accounts and short-term indicators to interpolate and extrapolate from the annual estimates. The choice between those approaches depends on the information used in the production of annual accounts being readily available in the same form at quarterly level.

12.09 The purpose of quarterly national accounts is different from that of annual national accounts. Quarterly national accounts focus on the short-term movements of the economy and provide a coherent measure of such movements within the national accounts framework. Emphasis is placed on growth rates and their characteristics over time such as acceleration, deceleration or change in sign. The annual national accounts' emphasis is on levels and the structure of the economy, as well as growth rates.

Annual national accounts are less suitable than quarterly national accounts for business cycle analyses, because annual data mask short-term economic developments.

12.10 Quarterly national accounts may be used in the compilation of annual national accounts. They improve the reliability and timeliness of annual national accounts and, in some countries, annual national accounts are directly derived from the aggregation over the year of quarterly national accounts. Those different roles reflect differences in data availability and in compilation processes.

12.11 A range of data feeds into the compilation of quarterly national accounts, such as short term statistics on production, prices, employment and external trade, confidence indicators of business and consumers and administrative data like VAT revenues. In comparison to such indicators, quarterly national accounts offer:

(a) a broader scope;

(b) exhaustiveness;

(c) a coherent national accounts framework;

(d) consistency with the concepts and data in national accounts;

(e) international comparability based on an international methodological framework, the 2008 SNA.

12.12 The coverage of quarterly national accounts corresponds to the coverage of annual accounts, encompassing the entire sequence of accounts and the corresponding aggregates as well as the supply and use framework. However, the reduced availability of information and the quarterly frequency of compilation usually result in reduced coverage and scope for quarterly national accounts.

The quarterly accounts framework includes the following:

(a) main aggregates, including employment and population;

(b) financial and non-financial accounts by institutional sector;

(c) limited detail breakdowns of key aggregates such as gross value added, final consumption expenditure, gross fixed capital formation, imports and exports of goods and services, and employment; and

(d) a simplified sequence of accounts.

Such elements are usefully complemented, for compilation purposes, by a simplified supply and use framework.

Specific features of quarterly national accounts

12.13 Compilation issues which are especially important for quarterly national accounts are:

(a) time of recording;

(b) flash estimates;

(c) balancing and benchmarking;

(d) chain-linked volume measures; and

(e) seasonal and calendar adjustments.

Time of recording

12.14 The rules on the time of recording that apply to quarterly national accounts are the same as those that apply for annual national accounts. However, specific measurement problems with respect to the time of recording arise due to the shorter period of recording. This affects, in particular, measuring of:

(a) work-in-progress;

(b) activities in specific periods within a year; and

(c) low-frequency payments.

12.15 For quarterly national accounts, recording of activities and flows concentrated in specific periods within a year is important. The size of such activities by quarter, such as the output of agriculture, construction and tourism, depends on external factors such as the weather and official holidays. The payment of wages, taxes, social benefits and dividends can be subject to temporary quarterly effects such as annual bonuses being paid in one month. Errors in measuring the timing and size of such events lead to errors in the measurement of quarterly growth.

Work-in-progress

12.16 Work-in-progress is incomplete output that is not yet ready for delivery. It occurs when production lasts more than one period. Long production cycles occur in activities such as agriculture, construction, manufacturing of machinery, cars and ships, and services like the development of software, architectural services, the making of a film or large sport events. Such long production processes are often accompanied by progress payments, occurring especially in activities such as shipbuilding, aircraft construction, wine production and advertising contracts.

Measurement of such production requires that a single process is split into separate periods. This is more difficult for quarterly national accounts than for annual national accounts. However, the same principles apply for measuring work-in-progress on a quarterly and on an annual basis.

Activities concentrated in specific periods within a year

12.17 Allocation of output on the basis of costs incurred over time is the normal means of allocating eventual output to periods on an accruals basis, but does not always apply in full. No output should be allocated to periods in which there is no ongoing production process, even if there are ongoing costs. This applies to the cost of using capital, for example rental payments for the use of machinery. This situation can apply to agriculture, where there may be no production in some periods. Periods with no output can also arise in food processing industries that are dependent on products from harvests.

Low-frequency payments

12.18 For an activity occurring throughout the year, low-frequency payments are payments made once a year, or infrequent instalments over the year. Examples of such payments are dividends, interest, taxes, subsidies and employee bonuses, such as end-of-year bonuses and vacation bonuses. All such distributive transactions are recorded on an accrual basis, when the claim arose rather than when it was paid. This issue of timing of recording also occurs in annual national accounts, when payments may partly relate to another accounting year.

12.19 In order to deal with such timing issues, two categories of payments are distinguished.

(a) Payments that have a purely ad hoc character are to be recorded in the period in which they are actually made. Dividends, for example, are usually determined only after the books are closed on a fiscal year and may not relate to the company's profits over that year.

(b) Payments that have a fixed relation to a particular period (e.g. accrued in a previous period or accrued over a number of accounting periods) are to be allocated to the periods in which they accrued. Examples are taxes on income and products, that may be collected in a subsequent period.

12.20 The application of accrual principles to quarterly data in such cases may be extremely difficult, and alternative methods are necessary, such as a cash adjusted basis, or allocating accrual payments to periods so that there is minimal distortion of the characteristics of time series.

Flash estimates

12.21 Quarterly national accounts provide an overview of the state of the economy with a short delay after the end of the reference quarter. The timely availability of such information helps to identify and interpret economic trends. For this reason, flash estimates of key macroeconomic aggregates including GDP growth and quarterly national accounts indicators are compiled more frequently by statistical authorities.

12.22 A flash estimate is an early estimate of an economic variable for the most recent reference period. The flash estimate is normally calculated on incomplete data, but using the same statistical or econometric model as for regular estimates. The compilation of flash estimates incorporates as much data as possible. The differences between flash estimates and traditional estimates are as follows:

(a) timeliness: flash estimates are available earlier than the traditional estimates;

(b) accuracy: there is a trade off between timeliness and accuracy. Flash estimates are in general more prone to revision than the traditional ones;

(c) coverage: the number of variables covered by flash estimates is more limited than traditional estimates;

(d) information: flash estimates are based on less information. Often the information for traditional estimates is not fully available;

(e) estimation method: due to the lack of data, flash estimates rely more on econometric methods and assumptions.

Balancing and benchmarking of quarterly national accounts

12.23 Quarterly national accounts are a coherent set of accounts compiled on a quarterly basis. They are an integral part of the national accounts framework and are consistent with annual accounts.

12.24 The internal consistency of quarterly accounts is achieved by reconciling estimates of supply and use for the accounts on a quarterly basis. The consistency with annual accounts is ensured either by benchmarking quarterly accounts to annual accounts or by deriving annual accounts from quarterly accounts.

Balancing

12.25 The balancing or reconciliation process is an integral part of the compilation process of national accounts. It makes optimum use of the diverse sources of information underpinning different measures in the accounts. In broad terms, balancing seeks to fit the statistical basic data underlying the different approaches to the compilation of GDP and the other parts of the accounts into a supply and use framework, and so use all the available information in an effective manner.

12.26 The principles and procedures of the balancing process applied to annual accounts apply to quarterly accounts, with additional procedures reflecting the quarterly frequency of compilation. Such additional procedures reflect the following features of quarterly accounts:

(a) maintaining consistency between seasonally adjusted and unadjusted data;

(b) ensuring consistency between current price and volume measures;

(c) reconciling measures from the different approaches to the compilation of GDP.

A simplified quarterly supply and use framework will help in balancing quarterly national accounts. When annual supply and use tables are regularly compiled, information in the quarterly supply and use tables can be explicitly linked to them as part of the balancing and benchmarking process.

Consistency between quarterly and annual accounts — benchmarking

12.27 The process of alignment of quarterly accounts to annual ones can be approached in two ways:

(a) aligning quarterly accounts to annual accounts, also known as benchmarking;

(b) deriving annual accounts from quarterly accounts.

12.28 Discrepancies between quarterly and annual accounts are mainly due to differences in sources, and availability of information from shared sources.

12.29 Many different methods can be used for reconciling quarterly and corresponding annual aggregates.

The ideal method is to identify the causes of the differences and to derive new, reconciled quarterly and annual aggregates using all available information.

Benchmarking techniques ensure consistency between the two sets of aggregates by taking one as the standard and adapting the other to be consistent with it, through a variety of methods from simple mathematical adjustments to complex statistical and econometric procedures. Benchmarking techniques aim to ensure the accounting coherence of the two sets of aggregates in terms of preservation of movements or other well-defined criteria.

Benchmarking is an integral part of the compilation process and should, in principle, be conducted at the most detailed compilation level. In practice, this may imply benchmarking different series in stages over time, where data for some series, which have already been benchmarked, are used to estimate other series, followed by a second or third round of benchmarking.

12.30 When quarterly aggregates are taken as the benchmark, annual aggregates are derived by adding the appropriate quarterly figures. In this way, consistency is ensured.

12.31 Very often, the reconciliation between quarterly and annual aggregates results from a mix of benchmarking approaches: for example, preliminary annual estimates can be derived by aggregating quarterly figures, and, once annual information becomes available and the annual aggregate is revised, the annual benchmark is applied to revise the corresponding quarterly figures.

Chain-linked measures of price and volume changes

12.32 For annual national accounts, the measure of price and volume changes is in principle through an annual chain index. For the sake of coherence, the quarterly measures of price and volume changes are constrained to the annual chain-linked measures.

12.33 Consistency between quarterly and annual accounts price and volume measures requires either that the annual measures are derived from quarterly measures or that the quarterly data is constrained to the annual using benchmarking techniques. This is true even if the basic requirement is met that the quarterly and annual measures are based on the same methods of compilation and presentation, for example using the same index formula, base year and reference period. Strict consistency is not possible because quarterly indices will not normally reflect exactly the same growth as the corresponding annual indices, due to the index mathematical form.

12.34 Whilst quarterly chain-linked volume measures could be based on quarterly frequency of chain linking, chain linking is in principle to be carried out annually. Quarterly volume measures are annually chain linked.

12.35 Quarterly national accounts chain-linked volume series are quarterly volume changes using the annual averages of prices of the previous year. Three approaches for annually chain linking quarterly volume indexes may be used:

(a) annual overlap;

(b) one-quarter overlap;

(c) over-the-year approach.

Creating a time series by applying one of the three chain-linking techniques normally induces structural breaks in the resulting chain-linked series, the impact of which is determined by the chosen linking approach and by the change of the price structure over time.

12.36 The annual overlap approach uses the annual average values of the respective previous year in prices of that year. It results in annual aggregates of quarterly volume measures identical to the independently derived chain-linked annual national accounts series. Moreover, the quarter-on-quarter rates of change within the same calendar year between Q1 and Q 4 are not affected by breaks. However, the volume series is affected by breaks occurring from the fourth quarter of a year to the first quarter of the following year, which also appear in the respective quarter-on-quarter rate of change.

12.37 By contrast, the one-quarter overlap approach generally leads to undistorted quarter-on-quarter rates of change for all quarters of the year, since the chain links refer to the quantities of the fourth quarter of the respective previous year valued at average prices of that year. However, unlike the annual overlap approach, the one-quarter overlap approach leads to quarterly chain-linked series which are not consistent with the independently derived chain-linked annual national accounts series.

12.38 The over-the-year approach of chain linking leads to undistorted year-on-year growth rates for all quarters, since the chain links refer to the volumes of the same quarter in the respective previous year, valued at average prices of that year. However, this approach leads to results that are affected by structural breaks in every quarter, so that each quarter-on-quarter rate of change is affected by a break. Hence, the over-the-year approach impacts most on the intra-annual profile of a series.

12.39 Provided the substitution effects (changes in volumes due to shifts in price structure) within a year are small, the three approaches for quarterly chain linking of volumes lead to very similar results.

Based on practical considerations such as quarterly growth consistency with annual chain-linked growth and simplicity and transparency of computation, the annual overlap method is the recommended method.

Seasonal and calendar adjustments

12.40 Seasonality is any pattern that recurs on a regular basis within the same period of each year.

An example is the sale of ice cream in the summer. Regularly recurring events are smoothed over the year by adjusting for seasonality, whereas the impact of irregular events remains unaffected. Adjusting for seasonality includes allowing for the different lengths of months and quarters. The seasonally adjusted results reflect 'normal' and recurring events over the whole year in which they occur. Seasonally adjusted series reveal more clearly than unseasonally adjusted series the following features for example:

(a) changes in trend; and

(b) turning points in the business cycle.

12.41 The calendar effect is the impact on a time series of the following:

(a) the number and composition of working and trading days;

(b) the occurrence of fixed and moving holidays;

(c) leap years and other calendar phenomena such as bridging days.

12.42 The presence of seasonal and calendar effects in quarterly national accounts time series obscures the trend in growth of quarterly national accounts aggregates. So, adjustments for seasonal effects and calendar effects assist in the drawing of inferences on trends from quarterly national accounts; furthermore, seasonal adjustment reveals the impact of major irregular effects or events to help in understanding economic developments through the quarterly national accounts statistics.

12.43 Seasonal variations are commonly the effect of variations in energy use, tourism activity, weather conditions that affect outdoor activity such as construction, salary bonuses and fixed holidays effects, as well as all kinds of institutional or administrative practices. Seasonal variations in quarterly national accounts depend also on the data sources and compilation methods used.

12.44 For a reliable estimation of seasonal factors, the time series may need to be pre-treated. This prevents outliers such as impulse outliers, transitory changes and level shifts, calendar effects and national holidays from affecting the quality of the seasonal estimates. However, outliers should remain visible in the seasonally adjusted data unless they are the result of errors, because they may reflect specific events such as strikes, natural disasters, etc. Therefore the outliers should be reintroduced into the times series after the seasonal components have been estimated.

Sequence of compilation of seasonally adjusted chain-linked volume measures

12.45 The compilation of seasonal and calendar adjusted quarterly national accounts chain-linked volume measures is the result of a sequence of operations including seasonal and calendar adjustment, chain linking, benchmarking and balancing, applied to the available basic or aggregated information.

12.46 The sequence of application of the different steps of the compilation process of seasonally adjusted chain-linked quarterly national accounts volume measures depends on the specificities of the production process and on the level of aggregation at which it is applied.

Ideally, seasonally adjusted chain-linked volume series are obtained by seasonally adjusting the chain-linked series, followed by a benchmarking of the adjusted chain-linked series.

12.47 There are quarterly national accounts compilation systems in which seasonally adjusted data are produced at a very detailed level, and even at a level at which no chain linking is applied, e.g. when producing quarterly national accounts from quarterly supply and use tables. The order in this case is seasonal adjustment, followed by balancing, chain linking and benchmarking. At a disaggregated level, the estimates of the seasonal component may not be as reliable as at higher quarterly national accounts levels. Particular care is then needed for revisions of the seasonal component. Furthermore, balancing and chain linking seasonally adjusted data must not result in a seasonal pattern being introduced into the series.

12.48 Quarterly national accounts volume measures in average prices of the previous year can be chain linked by using the one-quarter-overlap, the annual overlap or the over-the-year technique. From the perspective of seasonal adjustment of quarterly national accounts volume measures, the one-quarter-overlap and the annual overlap technique are preferred. The over-the-year-technique is not recommended as it can introduce breaks in every single quarter-on-quarter movement of the series.

12.49 Seasonally adjusted chain-linked quarterly volume measures are constrained to the respective non-seasonally adjusted chain-linked annual data by using benchmarking or constraining techniques that minimise the impact on the quarter-on-quarter changes of the series. The benchmarking is required for purely practical reasons, e.g. the consistency of annual average growth rates. Benchmarking shall not result in introducing a seasonal pattern in the series. The reference should be the independently derived chain-linked annual series in unadjusted form for only seasonally adjusted quarterly national accounts. Exceptions from the desired consistency over time are acceptable if the seasonality is changing rapidly.

12.50 The calendar effect can be divided into a seasonal and a non-seasonal component. The former corresponds to the average calendar situation that recurs each year at the same season; the latter corresponds to the deviation of the calendar variables, such as numbers of trading/working days, moving holidays and leap year days, from the month- or quarter-specific average.

12.51 Calendar adjustment removes those non-seasonal calendar components from the series, for which there is statistical evidence and an economic explanation. Calendar effects, for which a series are adjusted for, should be identifiable and sufficiently stable over time or, alternatively, it should be possible to model their changing impact over time appropriately.

CHAPTER 13

Regional accounts

Introduction

13.01 This Chapter describes regional accounts in general and clarifies the purposes and major conceptual principles and compilation issues typical for regional accounts.

13.02 *Definition:* regional accounts are a regional specification of the corresponding accounts of the national economy. Regional accounts provide a regional breakdown for major aggregates such as gross value added by industry and household income.

13.03 National accounts concepts shall be used for regional accounts unless indicated otherwise in this Chapter.

National totals hide differences in regional economic conditions and performances. Population and economic activities are generally unevenly distributed among regions. Urban regions are generally specialised in services, while agriculture, mining activities and manufacturing tend to be located in non-urban regions. Major issues such as globalisation, innovation, ageing, taxation, poverty, unemployment and the environment often have a regional economic dimension. Regional accounts are, therefore, an important complement to national accounts.

13.04 Regional accounts comprise the same set of accounts as national accounts, in that they make regional economic structures, developments and differences visible. Conceptual and measurement problems result in a set of accounts for regions which are more limited in scope and detail than national accounts.

The tables on regional production activities by industry show:

(a) the size and the dynamic of production and employment by region;

(b) the contribution of regions to national aggregates;

(c) the specialisation of each region;

(d) the role of the various regions for each industry.

Regional household income accounts show primary and disposable household income by region, as well as the sources and distribution of income amongst regions.

13.05 In several Member States, regions at various levels have a substantial autonomy of decision-making. Regional accounts corresponding to such regions are, therefore, important for national and regional policy.

13.06 Regional accounts also serve important specific administrative purposes, e.g.:

(a) to allocate the revenues of a specific national tax to regional governments;

(b) to allocate funds as part of European cohesion policy.

13.07 Regional accounts can be used flexibly at various levels of aggregation. This does not only correspond to geographic regions. Geographic regions can also be grouped by economic structure, location and economic relationships with other (neighbouring) regions. This is in particular useful for analysing national and European economic structures and development.

13.08 Regional accounts shall be compiled on the basis of regional data collected directly, and national data with regional breakdowns based on assumptions. The more complete the data collected directly, the less the role of assumptions. The lack of sufficiently complete, timely and reliable regional information requires assumptions in compiling regional accounts. This implies that some differences between regions are not necessarily reflected in regional accounts.

Regional territory

13.09 A regional economy of a country is part of the total economy of that country. The total economy is defined in terms of institutional units and sectors. It consists of all the institutional units which have a centre of predominant economic interest in the economic territory of a country (see paragraph 2.04). The economic territory does not coincide exactly with the geographic territory (see paragraph 2.05). The economic territory of a country is divided into regional territories and the extra-regio territory.

13.10 The regional territory consists of that part of the economic territory of a country that is directly assigned to a region, including any free zones, bonded warehouses and factories.

13.11 The extra-regio territory is made up of parts of the economic territory of a country which cannot be assigned to a single region. It consists of:

(a) the national air-space, territorial waters and the continental shelf lying in international waters over which the country enjoys exclusive rights;

(b) territorial exclaves (i.e. geographic territories situated in the rest of the world and used, under international treaties or agreements between states, by general government agencies of the country — embassies, consulates, military bases, scientific bases etc.);

(c) deposits of oil, natural gas etc. in international waters, outside the continental shelf of the country, worked by resident units.

13.12 The NUTS classification provides a single, uniform breakdown of the economic territory of the European Union. For national purposes, regional accounts may also be compiled at a more detailed regional level.

Units and regional accounts

13.13 Two types of units are distinguished for the national economy. First, records for the institutional unit reflect flows affecting income, capital and financial transactions, other flows and balance sheets. Second, records for the local kind of activity unit (local KAU) show flows occurring in the process of production and in the use of goods and services.

Institutional units

13.14 For regional accounts, depending on the regional level, two types of institutional units can be distinguished:

(a) Uniregional units, where the centre of predominant economic interest is in one region. Examples of uniregional units are households, corporations the local KAUs of which are all located in the same region, most local and regional governments, part of social security and NPISHs.

(b) Multiregional units, where the centre of predominant economic interest is in more than one region. Corporations and NPISHs are examples of units which span regions. Other examples are institutional units whose activities span the whole country, such as central government and a small number of corporations exercising monopolies or near-monopolies.

13.15 All transactions of uniregional institutional units are allocated to the region in which such units have their centre of predominant economic interest. For households, the centre of predominant economic interest lies in the region where they are resident, not the region where they work. Other uniregional units have their centre of predominant economic interest in the region where they are located.

13.16 Some of the transactions of multiregional units cannot be allocated to regions. This is the case for most distributive and financial transactions. Consequently, balancing items of multiregional units such as saving and net lending are not recorded at the regional level for multiregional units.

Local kind-of-activity units and regional production activities by industry

13.17 Enterprises can engage in production activities at more than one location, and for regional accounts it is necessary to allocate the activities to location.

Where enterprises are partitioned by location, the partitioned parts are called local units.

13.18 Institutional units can be classified on the basis of economic activities to describe the economy's production activities by industry. This results in heterogeneous industries, as many enterprises have substantial secondary activities that are different from their principal activity. It also results in some industries having the principal product of the industry as a small proportion of total output. In order to obtain groups of producers whose activities are more homogeneous in terms of output, cost structure and technology of production, enterprises are partitioned into smaller and more homogeneous units. These are called kind-of-activity units.

13.19 The local kind-of-activity unit (local KAU) is the part of a kind-of -activity unit (KAU) which corresponds to a local unit. When a KAU is engaged in production activities in several regions, the information on the KAU is split in order to obtain regional accounts. For this splitting, information is required on compensation of employees, or employment if this is not available, and gross fixed capital formation. For enterprises situated in a single location and in which the principal activity accounts for most of the value added, the local KAU is the same as the enterprise.

13.20 An industry for a region consists of a group of local KAUs engaged in the same, or similar, kind-of-activity.

13.21 When defining a local KAU there are three distinct cases.

(a) A production activity with significant labour input at a fixed location. Significant labour input, in this context, at a minimum is the yearly equivalent of one person regularly working half a day.

(b) A production activity without significant labour input at a fixed location is generally not to be considered as a separate local KAU and the production should be attributed to the local unit that is responsible for managing this production. However, there are exceptions to this rule, examples being windmills, the extraction of oil and gas, internet hubs and fully automatic petrol stations. Such production activities may be located in one region and fully managed in a different region. The output of such activities is not recorded in the region where they are managed, as production takes place in the other region. Gross fixed capital formation should be recorded in the same region as the associated output and value added.

(c) For a production activity without a fixed location the concept of residence (see paragraph 2.04) at the national level is applied. For example, major construction projects undertaken by contractors from other regions are registered as a separate local KAU. Examples of major construction projects are building bridges, dams and power stations, that take a year or more to complete and are managed through a local site office. For construction projects of less than a year, the residence of the parent construction company is used to allocate the production by region.

13.22 Production transactions between local KAUs, which belong to the same institutional unit and are located in different regions, are recorded. However, no delivery of ancillary output between local KAUs is recorded, unless it is observable (see paragraph 1.31). This implies that only deliveries of principal or secondary output between local KAUs are recorded, as far as this is practised in national accounts.

13.23 If an establishment undertaking only ancillary activities is statistically observable, in that separate accounts for the production it undertakes are readily available, or if it is in a geographically different location from the establishments it serves, it is recorded as a separate unit and allocated to the industrial classification corresponding to its principal activity, in both national and regional accounts. In the absence of suitable basic data being available, the output of the ancillary activity is estimated by summing costs.

Methods of regionalisation

13.24 Regional accounts are based on the transactions of units that are resident in a regional territory. In general, regional accounts are compiled by using the following:

(a) bottom-up methods;

(b) top-down methods; or

(c) a mixture of bottom-up and top-down methods.

13.25 The bottom-up or ascending method of estimating a regional aggregate consists of collecting data directly for resident units, and compiling regional estimates by aggregation.

A pseudo-bottom-up approach is acceptable when data for local KAUs is not available. Data for local KAUs can be estimated from enterprise, KAU or local unit data using distribution models. The estimates are aggregated to obtain regional totals as in the bottom-up approach.

In the second stage of the compilation process, bottom-up estimates are reconciled with the totals from the national accounts.

13.26 When information is only available at the level of units which contain several local KAUs engaged in different activities and regions, indicators such as compensation of employees, and employment by region, are used to compile regional breakdowns by industry.

13.27 The top-down method is distributing a national total across the regions, without attempting to distinguish resident units by region. The national figure is distributed using an indicator that is distributed across regions in the same way as the variable to be estimated.

The notion of a resident unit by region is needed in order to achieve regional coverage of the indicator used to produce the regional allocation of the variable required.

13.28 Bottom-up methods are rarely encountered in their pure form. Mixed methods are also acceptable. For example, regional estimates of a variable or an aggregate of variables may only be possible with the help of the bottom-up method at macro-regional level. For estimates at a more detailed regional level, a top-down method is then applied.

13.29 Direct measures of regional values are preferred to indirect measures. If complete and reliable micro-data is available at the level of local KAUs, regional values that correspond in concept with the national values are estimated by the bottom-up method. To obtain consistency with the national accounts totals, those regional accounts estimates are then made consistent with national accounts aggregates.

13.30 Indirect measurement on the basis of national aggregates and an indicator that is correlated with the variable to be measured is subject to measurement errors. For example, national figures on gross value added by industry can be allocated to regions using regional employment statistics, under the assumption that, for each industry, gross value added per employee is the same for all regions. Compiling at a detailed breakdown level of industry improves top-down calculations.

13.31 Aggregates of production are allocated to the region where the unit carrying out the relevant transactions is resident. The residence of the local KAU is an essential criterion for the allocation of such aggregates to a particular region. The residence principle is preferred to a territorial approach in which production activities are allocated on the basis of their location.

13.32 For specific industries, like construction, energy production and energy distribution, communication networks, transport and financial intermediation, and for some transactions in the household accounts such as property income, specific problems in the allocation to regions exist. For international comparability of regional accounts, the same compilation methods, or methods yielding similar results, are employed.

13.33 Gross fixed capital formation is allocated to regions by ownership. Fixed assets owned by a multiregional unit are allocated to the local KAUs where they are used. Fixed assets used under an operating lease are recorded in the region of the owner of the assets, and those used under a financial lease are recorded in the region of the user.

Aggregates for production activities

Gross value added and gross domestic product by region

13.34 Three approaches can be used for estimating regional gross domestic product: the production, income and expenditure approaches.

13.35 The production approach measures regional gross domestic product at market prices as the sum of gross value added at basic prices, plus taxes minus subsidies on products. Gross value added at basic prices is measured as the difference between output at basic prices and intermediate consumption at purchasers' prices.

13.36 The income approach measures regional gross domestic product at market prices by measuring and aggregating the various uses in the regional part of the total economy generation of income account: compensation of employees, gross operating surplus and taxes less subsidies on production. Information by industry on compensation of employees and employment is often available at regional level. This information is used in estimating gross value added by industry directly or via the production approach. The income approach for regional gross domestic product overlaps with the production approach.

13.37 Information on gross operating surplus is generally not available by industry and by region. Information on gross operating surplus of market producers can be derived from the business accounts of enterprises. A breakdown by institutional sector and by region is often not available. This is a barrier to using the income approach to the estimation of regional gross domestic product.

13.38 Taxes (less subsidies) on production consist of taxes (less subsidies) on products and other taxes (less subsidies) on production. The allocation of taxes (less subsidies) on products is discussed in paragraph 13.43. For the other taxes (less subsidies) on production, information may be available by industry, e.g. in business surveys or by inferring from the specific type of tax or subsidy of the industry involved. This can then be an indicator for allocation of gross value added by region.

13.39 For measuring regional gross domestic product, the expenditure approach is not used due to lack of information. Examples where there is a lack of data are direct information on inter-regional sales and purchases, and a breakdown of exports and imports between regions.

The allocation of FISIM to user industries

13.40 Financial intermediation services indirectly measured (FISIM) are treated in regional accounts in the same way as in national accounts. The allocation of intermediate consumption of FISIM by user industries to regions poses a problem, because estimates of stocks of loans and deposits are usually not available by region. Where this is the case, the allocation of FISIM to user industry is made with a second-best method: regional gross output or gross value added by industry are used as distribution indicators.

Employment

13.41 Regional production measures are consistent with employment estimates in a region when employment includes both the residents and the non-residents who work for regional producer units. Regional employment is defined consistently with the principles governing employment and residence for the national economy (see paragraph 11.17).

Compensation of employees

13.42 For producers, compensation of employees is allocated to the local KAUs where the people are employed. Where this data is not available, compensation of employees is allocated, as a second-best method, based on the hours worked. If neither compensation of employees nor hours worked are available, the number of employees by local KAU is used. Compensation of employees in the household accounts is allocated to regions according to residence.

Transition from regional GVA to regional GDP

13.43 In order to calculate GDP at market prices for regions, taxes and subsidies on products are allocated to the regions. By convention, these supra-regional taxes and subsidies are allocated on the basis of the relative size of gross value added of all industries in the region valued at basic prices. Alternative methods of allocation can be applied on a case-by-case basis for territories with specific fiscal systems, resulting in significantly different rates of taxes and subsidies on products within a country.

13.44 Per inhabitant figures can be calculated for the GDP of all regions. These figures are not calculated for extra-regio measures.

13.45 Regional gross domestic product per inhabitant can be significantly influenced by commuter flows between regions. Net commuter inflows into regions increase production beyond that possible by the resident active population. GDP per inhabitant appears relatively high in regions with net commuter inflows and relatively low in regions with net commuter outflows.

Volume growth rates of regional GVA

13.46 In measuring price and volume changes, the principles applied for the national economy shall apply also to regions. However, there are problems with regional data which make applying these principles to regions difficult. Examples of the difficulties are the following:

(a) information on regional price changes is often not available;

(b) if regional value added in current prices is directly estimated and not by deducting intermediate consumption from output, then double deflation of regional value added is not possible;

(c) in the absence of regional supply and use tables, price and volume changes cannot be measured and assessed in such a framework.

13.47 A commonly used approach is therefore to deflate regional value added by industry on the basis of national price changes by industry. This is carried out at the most detailed level at which gross value added at current prices is available. Differences between national and regional price changes due to differences in economic structure by industry are taken into account. However, this solution is still vulnerable to major differences between national and regional price changes. Examples of such differences are:

(a) differences in cost structure and composition of outputs within one industry between producers in different regions. There can be large variations in price changes amongst regions for a single industry;

(b) regional differences in the price changes of major inputs, e.g. changes in the price of labour, land and renting office space. The existence of national wage agreements with no regional differentiation implies that regional differences in changes in wage rates are small.

13.48 Regional value added is deflated by using:

(a) regional deflators when available and of sufficient quality, using price changes of outputs rather than inputs. In some cases regional deflators can be obtained indirectly by combining information on value changes and volume changes. When regional prices are used (possibly in combination with national deflators by industry), the regional growth rates are calculated to be consistent with national growth rates;

(b) double deflation when possible. This is in particular appropriate where the price change of intermediate consumption deviates from that of output and where intermediate consumption is substantial.

Regional household income accounts

13.49 Distribution and redistribution of income result in balancing items, namely primary income and disposable income. In regional accounts these income measures are limited to households.

13.50 Regional accounts of households are a regional specification of the corresponding accounts at the national level. For measurement reasons the accounts are limited to:

(a) allocation of primary income account;

(b) secondary distribution of income account.

These accounts record primary income and disposable income of households which are resident in a region (see Table 13.1).

Table 13.1 — Regional household income accounts

		Region			Correction for regional flows without any national counterpart	National total
		a	**b**	**Extra-regio**		
Allocation of primary income						
Resources	B.2/B.3 Net operating surplus/mixed income					
	D.1 Compensation of employees					
	D.4 Property income receivable				Minus intraregional property income related to B2/B3	
Uses	D.4 Property income payable				Minus intraregional property income related to B2/B3	
	B.5 Primary income (balancing item)					
Secondary distribution of income account for households						
Resources	B.5 Primary income					
	D.62 Social benefits other than social benefits in kind					
	D.7 Other current transfers receivable					
Uses	D.5 Current taxes on income, wealth, etc.					
	D.61 Social contributions					
	D.7 Other current transfers payable					
	B.6 Disposable income (balancing item)					
	Supplementary information					
	Population (number of inhabitants)					
	Primary income per capita					
	Disposable income per capita					

13.51 The regional household accounts are based on the households that are resident in a regional territory. The number of persons that are members of the resident households adds up to the total resident population of the region.

13.52 The rules for determining the residence of households at the national level shall also apply to the regional accounts of households. By way of exception, when the host region is in the same country as the region of residence, students and long-term patients are treated as resident of the host region if they stay there more than one year.

13.53 The household accounts can be extended by the use of income accounts. This requires the allocation by region of national accounts statistics on final consumption expenditure by households and the adjustment for the change in net equity of households in pension fund reserves. Regional saving by households is the balancing item.

13.54 Allocation by region of final consumption expenditure by households requires reliable regional information from for example an extended household budget survey. However, such a regional breakdown is often absent and in the national accounts final consumption expenditure by households is often estimated using other information. In these circumstances, constructing a regional breakdown is more difficult.

13.55 Governments can play an important role in providing education, health care and social services to households, through social transfers in kind. The role of such social transfers in kind differs substantially between different countries and can show major fluctuations over time. Allocating such social transfers in kind to regions implies that regional actual final consumption by households and adjusted disposable income by households can be obtained. Considering the important role of social transfers in kind in some Member States, comparing actual final consumption and actual disposable income by households across Member States can give a different picture from a comparison based on final consumption expenditure and disposable income by households.

CHAPTER 14

Financial intermediation services indirectly measured (FISIM)

The concept of FISIM and the impact of their user allocation on main aggregates

14.01 One traditional way in which financial services are provided is by means of financial intermediation. This is the process whereby a financial institution such as a bank accepts deposits from units wishing to receive interest on funds, and lends them to units whose own funds are insufficient to meet their needs. The bank thus provides a mechanism to allow the first unit to lend to the second. The unit lending funds accepts a rate of interest lower than that paid by the borrower. A 'reference rate' of interest is the rate at which both lender and borrower would be happy to strike a deal. The difference between the reference rate and the rate actually paid to depositors and charged to borrowers is a financial intermediation service charge indirectly measured (FISIM). The total FISIM is the sum of the two implicit fees paid by the borrower and the lender.

14.02 However, it is seldom the case that the amount of funds lent by a financial institution exactly matches the amount deposited with them. Some money may have been deposited but not yet loaned; some loans may be financed by the bank's own funds and not from borrowed funds. However, the depositor of funds receives the same amount of interest and intermediation service whether or not his funds are lent, and the borrower pays the same rate of interest and receives the same intermediation service whether his funds are provided by intermediated funds or the bank's own funds. For this reason FISIM are estimated for all loans and deposits offered by a financial institution irrespective of the source of the funds. The amounts of interest recorded are calculated as the reference rate times the level of loan or deposit in question. The difference between those amounts and the amounts actually received by or paid to the financial institution are recorded as the indirect service charges paid by the borrower or depositor to the financial institution. The amounts recorded in the system as interest are described as 'ESA interest' and the total amounts actually paid to or by the financial institution are described as 'bank interest'. The total implicit service charge is the sum of the bank interest on loans less the ESA interest on the same loans plus the ESA interest on deposits less the bank interest on the same deposits.

14.03 FISIM apply only to loans and deposits provided by, or deposited with, financial institutions. The financial institutions in question need not be resident; nor need the clients of the financial institution be resident. Imports and exports of FISIM occur. The financial institution need not offer deposit-taking facilities as well as making loans. The financial subsidiaries of retailers are examples of financial institutions that make loans without accepting deposits. A money lender who has sufficiently detailed accounts to be treated as a corporation or a quasi-corporation can receive FISIM.

14.04 To consider the impact of the allocation of FISIM on GDP and national income, as compared with the situation where FISIM would not be allocated, five cases have to be considered:

(a) loans are provided and deposits are taken by resident financial intermediaries (FIs) for intermediate consumption of market producers (including households as owners of unincorporated enterprises and of dwellings):

the FISIM output of FIs is counterbalanced by the intermediate consumption of market producers. Therefore, there is no impact on GDP and national income;

(b) loans are provided and deposits are taken by resident FIs for intermediate consumption of non-market producers and for final consumption of households:

when FISIM is consumed by non-market producers, as intermediate consumption, the output of such producers is increased by the same amount since intermediate consumption is a part of the sum of their costs and the counterpart flow is an increase of final consumption expenditure. Therefore, GDP and national income increase by the amount of allocated FISIM.

Also, when FISIM is consumed by households as final consumers, GDP and national income increase by the amount of allocated FISIM;

(c) loans are provided and deposits are taken by resident FIs to non-resident non-FIs (exports of FISIM):

exports of FISIM are recorded, increasing GDP. But in the transition from GDP to national income, this increase is counterbalanced by a decrease of interest receivable less interest payable towards the rest of the world (as FISIM is deducted from interest receivable on loans and added to interest payable on deposits). Therefore, exports of FISIM do not impact national income;

(d) loans are provided and deposits are taken by non-resident FIs for intermediate consumption of market producers, including households as owners of unincorporated enterprises and of dwellings (imports of FISIM):

GDP decreases by the amount of this category of imports of FISIM, as their counterpart is intermediate consumption. But in the transition from GDP to national income, this decrease is counterbalanced by an increase of interest receivable less payable towards the rest of the world (as FISIM are added to interest receivable on deposits and deducted from interest payable on loans). Therefore, this category of imports does not impact national income;

(e) loans are provided and deposits are taken by non-resident FIs for intermediate consumption of non-market producers and for final consumption of households (imports of FISIM):

imports of FISIM by non-market producers correspond to intermediate consumption. The output of such producers is increased by the same amount since intermediate consumption is a part of the sum of their costs and the counterpart flow is an increase of final consumption expenditure. When measuring GDP from the production approach, the increase in intermediate consumption is matched by the rise of output, leaving value added unchanged. When measuring GDP from the expenditure side, the increase in final consumption expenditure is neutralised by the increase of imports of services. But in the transition from GDP to national income, there is an increase of interest receivable less payable towards the rest of the world (as FISIM is added to interest receivable on deposits and deducted from interest payable on loans). Therefore, national income increases by the amount of this category of imports of FISIM.

Also, when FISIM is imported by households as final consumers, there is no impact on GDP and national income increases as there is an increase of interest receivable less payable towards the rest of the world.

By convention, FISIM are not calculated for interbank loans and deposits between resident FIs, nor between resident FIs and non-resident FIs. But interbank loans and deposits are used to calculate reference rates.

14.05 From the five cases presented in paragraph 14.04, the impact of allocating FISIM on GDP and national income can be summarised in the following way:

(a) GDP increases by the amount of FISIM produced by resident FIs and allocated to sectors S.13 (general government), S.14 (for households as consumers), S.15 (NPISHs) and S.2 (rest of the world);

(b) GDP decreases by the amount of imported FISIM allocated to S.11 (non-financial corporations), S.12 (financial corporations) excluding S.121 (central bank), S.122 (deposit-taking corporations except the central bank) and

S.125 (other financial intermediaries, except insurance corporations and pension funds), and S.14 (for households as owners of dwellings and unincorporated enterprises);

(c) national income increases by the amount of FISIM (produced by resident FIs or imported) allocated to sectors S.13 (general government), S.14 (for households as consumers) and S.15 (NPISHs).

Calculation of FISIM output by sectors S.122 and S.125

14.06 FISIM are produced by FIs: the central bank (S.121); deposit-taking corporations except the central bank (S.122); and other financial intermediaries, except insurance corporations and pension funds (S.125).

FISIM calculations concentrate on subsectors S.122 and S.125; by convention, FISIM are not calculated for the central bank (see part VI).

Statistical data required

14.07 For each of the subsectors S.122 and S.125, data is needed in the form of a table of stocks of loans and deposits categorised by user sectors, and averaged over a four quarter period, and the corresponding accrued interest. The interest is calculated after reallocation of interest rate subsidies to the recipients.

Reference rates

14.08 In the balance sheets of financial intermediaries included in subsectors S.122 and S. 125, loans and deposits with resident units have to be broken down to differentiate between loans and deposits:

— which are interbank (i.e. within the institutional units providing FISIM included in subsectors S.122 and S.125),

— which are undertaken with the user institutional sectors (S.11 — other S.12 subsectors — S.13 — S.14 — S.15) (except with the central banks).

In addition, loans and deposits with the rest of the world (S.2) are broken down into loans and deposits with non-resident financial intermediaries and loans and deposits with other non-residents.

Internal reference rate

14.09 To obtain the FISIM output of the resident FIs by resident user institutional sector, the internal reference rate is calculated as the ratio of interest receivable on loans within and between subsectors S.122 and S.125 to stocks of loans within and between subsectors S.122 and S.125 as follows:

$$\frac{\text{interest receivable on loans within and between subsectors S.122 and S.125}}{\text{stock of loans within and between subsectors S.122 and S.125}}$$

In theory, the internal reference rate is the same when using deposits data rather than loans data. Due to data inconsistencies, the estimate from the deposits data will be different from the estimate from the loans data.

When the deposits data is more reliable, the internal reference rate should be calculated on interbank deposits as the ratio of:

$$\frac{\text{interest payable on deposits within and between subsectors S.122 and S.125}}{\text{stock of deposits within and between subsectors S.122 and S.125}}$$

If the loans and deposits data are equally reliable, the internal reference rate should be calculated on interbank loans and deposits as the ratio between interest receivable on loans incurred plus interest payable on deposits held between FIs, and the stock of loans plus the stock of deposits held by FIs on behalf of other FIs.

In cases where resident FIs, for their resident customers, provide loans and take deposits expressed in foreign currencies, several 'internal' reference rates by currencies or groups of currencies are to be calculated if this improves the estimates significantly. This would require splitting by currency or groups of currencies both the calculation of the 'internal' reference rates and the loans and deposits from resident FIs towards each resident user sector.

External reference rates

14.10 To determine FISIM imports and exports, the reference rate used is the average interbank rate weighted by the levels of stocks in the headings 'loans between resident FIs on the one hand, and non-resident FIs on the other hand' and 'deposits between resident FIs on the one hand, and non-resident FIs on the other hand', which are included in the balance sheet of the FIs. So the external reference rate is calculated as the ratio of interest on loans plus interest on deposits between resident FIs and non-resident FIs, to the stock of loans plus the stock of deposits between resident FIs and non-resident FIs.

Several external reference rates are to be calculated for different currencies or groups of currencies, if the data is available for each currency or group of currencies for the following categories, and if this improves the estimates significantly:

(a) loans and deposits from non-resident FIs towards each user sector;

(b) loans and deposits from resident FIs towards non-resident users.

Detailed breakdown of FISIM by institutional sector

14.11 By convention, no interbank FISIM have to be calculated between resident FIs, nor between resident FIs and non-resident FIs. FISIM are calculated in respect of non-bank user institutional sectors only.

For each institutional non-FI sector, it is necessary to have data according to the following table of loans and deposits granted by the resident FIs:

	Stocks	Interest receivable by resident FIs
Loans granted by resident FIs (S.122 and S.125)		

	Stocks	Interest payable by resident FIs
Deposits with resident FIs (S.122 and S.125)		

The total FISIM by institutional sector is obtained as the sum of FISIM on loans granted to the institutional sector and of FISIM on deposits of the institutional sector.

FISIM on the loans granted to the institutional sector is estimated as interest receivable on loans less (loan stocks multiplied by the internal reference rate).

FISIM on the deposits of the institutional sector is estimated as (deposit stocks multiplied by the internal reference rate) less interest payable on deposits.

Part of the output is exported; on the basis of the balance sheet of the FIs we observe:

	Stocks	Interest receivable by resident FIs
Loans to non-resident non-banks		

	Stocks	Interest payable by resident FIs
Deposits with non-resident non-banks		

Exports of FISIM are estimated using the external interbank reference rate, for loans granted to non-residents (excluding FIs), as interest receivable less (loan stock multiplied by the external reference rate).

Exports of FISIM on deposits of non-residents (excluding FIs) are estimated as (deposit stocks multiplied by the external reference rate) less interest payable.

Where several reference rates are used for different currencies or groups of currencies, the loans and deposits are split both by institutional user sectors and by the currencies (or groups of currencies) in which they are denominated.

Breakdown into intermediate and final consumption of FISIM allocated to households

14.12 FISIM attributable to households are broken down into the following categories:

(a) intermediate consumption of households in their capacity as owners of dwellings;

(b) intermediate consumption of households in their capacity as owners of unincorporated enterprises; and

(c) final consumption of households.

The estimation method requires a breakdown of loans to households (stocks and interest) into the following corresponding categories:

(i) dwelling loans;

(ii) loans to households as owners of unincorporated enterprises; and

(iii) other loans to households.

Loans to households as owners of unincorporated enterprises and dwelling loans are generally shown separately in the various breakdowns of lending in financial and monetary statistics. Other loans to households are obtained as a residual item by subtracting the two previously mentioned categories of loans from the total. FISIM for loans to households should be distributed amongst the three categories on the basis of information on stocks and interest for each of the three groups. Dwelling loans are not identical to mortgage loans, as mortgage loans can have other purposes.

Household deposits are broken down into:

(1) deposits of households as owners of unincorporated enterprises; and

(2) deposits of households as consumers.

In the absence of statistics on deposits of households as owners of unincorporated enterprises, stocks of deposits are calculated by one of the following methods:

Method 1

Stocks of deposits are calculated by assuming that the ratio of stocks of deposits to value added observed for the smallest size corporations applies for unincorporated enterprises.

Method 2

Stocks of deposits are calculated by assuming that the ratio of stocks of deposits to turnover observed for the smallest size corporations applies for unincorporated enterprises.

FISIM on the deposits of households must be distributed between FISIM on the deposits of households as owners of unincorporated enterprises and FISIM on the deposits of households as consumers on the basis of the average stocks of those two categories, for which, in the event of lack of further information, the same interest rate may be used.

As an alternative, where detailed information on loans and deposits of households is absent, FISIM to households are allocated to intermediate consumption and final consumption assuming that all loans are attributable to households as producer or as owners of dwellings and that all deposits are attributable to households as consumers.

Calculation of imports of FISIM

14.13 Non-resident FIs grant loans to residents and receive deposits from residents. Data according to the following table is needed for each institutional sector.

	Stocks	Interest receivable by non-resident FIs and payable by resident users
Loans granted by non-resident FIs		

	Stocks	Interest payable by non-resident FIs and receivable resident users
Deposits with non-resident FIs		

Imports of FISIM for each institutional sector are calculated as follows:

Imports of FISIM for loans are estimated as the interest receivable by non-resident FIs *less* (loan stocks *multiplied by* the external reference rate).

Imports of FISIM for deposits are estimated as (deposit stocks *multiplied by* the external reference rate) *less* the interest payable by non-resident FIs.

It is recommended that several external reference rates are used by currency or groups of currencies (see paragraph 14.10).

FISIM in volume terms

14.14 Volume estimates of FISIM are calculated using stocks of loans and deposits deflated to base period prices using a general price index such as the implicit price deflator for domestic final demand.

The price of FISIM has two components: the first is the difference between the bank rate of interest and the reference rate (or the reverse in the case of deposits) which represents the margin earned by the financial intermediary; the second is the price index used to deflate the stocks of loans and deposits to base period prices.

FISIM in volume terms are calculated as follows:

$$\begin{array}{c}\text{FISIM in volume}\\ \text{on the loans granted to the}\\ \text{institutional sector}\end{array} = \frac{\begin{array}{c}\text{FISIM on the loans granted}\\ \text{to the institutional sector}\end{array}}{\text{price index}} \times \frac{\text{base period margin}}{\text{effective margin}}$$

$$\begin{array}{c}\text{FISIM in volume}\\ \text{on the deposits of the}\\ \text{institutional sector}\end{array} = \frac{\begin{array}{c}\text{FISIM on the deposits of}\\ \text{the institutional sector}\end{array}}{\text{price index}} \times \frac{\text{base period margin}}{\text{effective margin}}$$

Base period margin on loans is *equal* to the effective interest rate on loans *less* the reference rate.

Base period margin on deposits is *equal* to the reference rate *less* the effective interest rate on deposits.

In nominal terms, the effective margin is equal to the ratio of FISIM to stocks, so replacing the effective margin by this expression in the two above formulas gives the following:

$$\begin{array}{c}\text{FISIM in volume}\\ \text{on the loans granted to the}\\ \text{institutional sector}\end{array} = \frac{\begin{array}{c}\text{stocks of loans granted to the}\\ \text{institutional sector}\end{array}}{\text{price index}} \times \text{base period margin}$$

$$\begin{array}{c}\text{FISIM in volume}\\ \text{on the deposits of the}\\ \text{institutional sector}\end{array} = \frac{\begin{array}{c}\text{stocks of deposits of the}\\ \text{institutional sector}\end{array}}{\text{price index}} \times \text{base period margin}$$

Calculation of FISIM by industry

14.15 The allocation of FISIM among user industries is based on the stocks of loans and deposits of each industry and, if this information is not reliable, on the output of each industry.

The output of the central bank

14.16 The output of the central bank is, by convention, to be measured as the sum of costs, i.e. its intermediate consumption, compensation of employees, consumption of fixed capital and other taxes less subsidies on production. FISIM do not have to be calculated for the central bank.

Commissions and fees for directly measured services invoiced by the central bank both in respect of resident and non-resident units should be allocated to these units.

Only the part of the total central bank output (sum of costs less commissions and fees) which is not sold has to be, by convention, allocated to the intermediate consumption of other FIs — subsectors S.122 (deposit-taking corporations except the central bank) and S.125 (other financial intermediaries, except insurance corporations and pension funds) — in proportion to the respective value added of each of these subsectors.

To equilibrate the accounts of subsectors S.122 and S.125, the amount of their respective intermediate consumption of the service provided by the central bank is to be counterbalanced by a current transfer (classified under D.759 'other miscellaneous current transfers') received from the central bank, for the same amount.

CHAPTER 15

Contracts, leases and licences

Introduction

15.01 Contracts are agreements on the terms under which goods, services and assets are provided to the customer. Contracts representing straightforward sales of goods, services or assets determine the value, and time of recording, of the transaction, which in the case of goods is the change of ownership. The difference between the time of payment and time of recording is reflected in entries recorded as other accounts receivable or payable in the financial account.

15.02 Leases, licences and permits are contracts which determine the classification of payments and the economic ownership of assets; some of the contracts are a separate type of non-financial asset.

15.03 In this Chapter, the recording of various groups of complex contracts and their underlying flows and stocks are discussed in seven sections:

(a) the distinction between operating leases, resource leases and financial leases;

(b) permits to use a natural resource;

(c) permits to undertake specific activities;

(d) public-private partnerships;

(e) service concession contracts;

(f) marketable operating leases;

(g) entitlements to future goods and services on an exclusive basis.

The distinction between operating leases, resource leases and financial leases

15.04 Three types of leases of non-financial assets are distinguished (see Table 15.1):

(a) operating lease;

(b) resource lease;

(c) financial lease.

Each of these leases relates to the use of a non-financial asset:

— in the case of operating leases and resource leases, there is no change of economic ownership and the legal owner continues to be the economic owner. Resource leases are used for natural resources, such as land and radio spectra. Operating leases are used for all other non-financial assets,

— in the case of financial leases, there is a change of economic ownership of the asset, and the legal owner of the asset is not considered to be the economic owner. Financial leases can apply to all non-financial assets, including in some situations natural resources.

15.05 Every entity such as a good and service, a natural resource, a financial asset or liability has both a legal owner and an economic owner. In many cases the economic and legal owners are the same. Where they are not, the legal owner has handed responsibility for the risk involved in using the entity in an economic activity to the economic owner along with the associated benefits. In return the legal owner accepts from the economic owner payments for another package of risks and benefits.

Table 15.1 — The recording of three different types of lease

Type of lease	Method of recording for the user
Operating lease (not for natural resources)	The user is not the economic owner of the non-financial asset The rentals are recorded as payments for a service, intermediate consumption or final consumption expenditure by general government, households and NPISHs
Resource lease (only for natural resources)	The user is not the economic owner of the natural resource. Payments are rents (property income)
Financial lease	The user is the economic owner of a non-financial asset, financed by a loan from the lessor. The payments are for the most part re-payment of principal and payments of interest on the loan. Part of the interest payments may be recorded as FISIM when the lender is a financial intermediary. This payment is classified as intermediate consumption or final consumption expenditure by general government, households and NPISHs

Table 15.2 — The recording of three different types of lease, by type of transaction

Type of transaction	Type of use, and asset involved
Intermediate consumption	Operating lease of produced assets, for example machines and intellectual property rights FISIM services on a financial lease
Consumption of fixed capital	Only for produced assets, and only for the economic owner
Final consumption expenditure	Operating lease of consumer durables Purchase of consumer durables (including when financed by a financial lease or hire purchase) FISIM services on a financial lease to final consumers
Purchase of non-financial assets	
Fixed capital formation	Purchase of produced assets (including when financed by a financial lease)
Acquisition of natural resources	Purchase of natural resources, including the right to use to extinction
Acquisition of other non-produced assets	Purchase of the right to use a natural resource for an extended period, for example a fishing quota
Property income payments	
Rent	Resource lease, i.e. payment for the use of a natural resource
Interest	Financial lease, i.e. purchase of a non-financial asset financed simultaneously by a loan
Financial transaction: loan	Financial lease, i.e. purchase of a non-financial asset financed simultaneously by a loan

15.06 *Definition:* the economic owner of entities such as a good and service, a natural resource, a financial asset or liability is the institutional unit entitled to claim the benefits associated with the use of the entity in the course of an economic activity by virtue of accepting the associated risks.

15.07 *Definition:* the legal owner of entities such as a good and service, a natural resource, a financial asset or liability is the institutional unit entitled in law and sustainable under the law to claim the benefits associated with the entities.

Operating leases

15.08 *Definition:* an operating lease is a lease whereby the legal owner is also the economic owner and accepts the operating risks and receives the economic benefits from the asset by charging for the use of it, in a productive activity.

15.09 One indicator of an operating lease is that it is the responsibility of the legal owner to provide for repair and maintenance of the asset.

15.10 Under an operating lease the asset remains on the balance sheet of the lessor.

15.11 The payments made for produced assets under an operating lease are referred to as rentals and are recorded as payments for a service (see Table 15.2). The character of an operating lease is best described in relation to equipment since operating leases are often for vehicles, cranes, drills, etc. However, any sort of non-financial asset may be subject to an operating lease. The service provided by the lessor goes beyond the mere provision of the asset. It includes other elements such as convenience and security. In the case of equipment, the lessor, or owner of the equipment, normally maintains a stock of equipment in good working order that can be hired on demand or at short notice. The lessor must normally be a specialist in the operation of the equipment. This is important in the case of highly complicated equipment, such as computers, where the lessee may not have the necessary expertise or facilities to service the equipment properly. The lessor may also undertake to replace the equipment in the event of a serious or prolonged breakdown. In the case of a building, the lessor is responsible for the structural integrity of the building and for replacement in the case of damage due to a natural disaster, for example, and is usually responsible for ensuring that elevators, heating and ventilation systems function adequately.

15.12 Operating leasing developed originally to meet the needs of users who require certain types of equipment only at regular intervals. Many operating leases are for short periods though the lessee may renew the lease when the period expires and the same user may use the same piece of equipment on several occasions. However, with the evolution of increasingly complicated types of machinery, especially in the electronics field, the servicing and back-up facilities provided by a lessor are important factors that may influence a user to lease rather than purchase. Other factors that may persuade users to lease over long periods rather than purchase are the consequences for the enterprise's balance sheet, cash flow or tax liability.

Financial leases

15.13 *Definition:* a financial lease is one where the lessor is the legal owner of an asset but the lessee is the economic owner as the latter bears the operating risks and receives the economic benefits from using the asset in a productive activity. In return, the lessor accepts another package of risks and rewards from the lessee, in the form of repayments associated with a loan. It is frequently the case that the lessor, though the legal owner of the asset, never takes physical delivery of the asset but consents to its delivery directly to the lessee. One indicator of a financial lease is that it is the responsibility of the economic owner to provide any necessary repair and maintenance of the asset.

15.14 Under a financial lease, the legal owner is shown as issuing a loan to the lessee, which the lessee uses to acquire the asset. Thereafter the asset is shown on the balance sheet of the lessee and not the lessor; the corresponding loan is shown as an asset of the lessor and a liability of the lessee. Payments under a financial lease are treated not as rentals but as the payment of interest and repayment of principal on the imputed loan. If the lessor is a financial intermediary, part of the payment is also treated as a service charge (FISIM).

15.15 Very often the nature of the asset subject to a financial lease may be quite distinct from the assets used by the lessor in his productive activity, for example a commercial airliner legally owned by a bank but leased to an airline. It makes no economic sense to record either the aircraft or its consumption of fixed capital in the accounts of the bank or to omit them from the accounts of the airline. The device of a financial lease avoids this undesirable form of recording the ownership of the aircraft and the decline in its value while keeping the net worth of both parties correct throughout the length of the lease.

15.16 It is common for a financial lease period to be for the whole of the economic life of the asset. When this occurs, the value of the imputed loan corresponds to the present value of the payments to be made under the lease agreement. This value will cover the cost of the asset and usually also include a fee charged by the lessor, which is accrued over the period of the lease. Payments made regularly to the lessor can be recorded as four components: interest payments, repayments of principal on the imputed loan, the lessor fee, and FISIM (if the lessor is a financial intermediary). If the terms of the agreement do not specify how the first three elements are identified, the repayment of principal must correspond to the decline in the value of the asset (the consumption of fixed capital), the interest payable must correspond to the return to capital on the asset and the service charge to the difference between the total amount payable and those two elements.

15.17 A financial lease may also exist when the lease period is less than the economic life of the asset. In this case, the value of the imputed loan again covers the cost of the asset and the fee charged by the lessor plus the value of the service charges to be made under the terms of the lease. Payments made regularly to the lessor shall be recorded as interest payments and repayments of principal on the imputed loan, the lessor fee, and for FISIM (if the lessor is a financial intermediary). It may also include prepayments funding the repurchase of the asset at the end of the lease period. At the end of the lease, the asset may transfer to the balance sheet of the lessee, depending upon the contractual arrangements. The value of the residual amounts outstanding on the loan will be equal to the expected market value of the asset at the end of the lease period as determined at the start of the lease. At this point, the asset could be returned to the lessor, an option invoked for the lessee to legally acquire the asset, or a new lease arrangement set up.

A financial lease requires the lessee to bear the risks and rewards associated with using the asset. Therefore, any holding gains and losses on the expected value of the asset at the end of the lease period shall be borne by the lessee. In this case, where the asset is legally acquired by the lessee at the end of the lease period, then the cash payments are recorded as the repayment of the loan since the asset is already on the balance sheet of the lessee.

If the asset reverts to the lessor, then a transaction representing the purchase of the asset is recorded at the current market value of the asset. The proceeds are used to repay the amount outstanding on the loan and any difference between those amounts is recorded as a capital transfer. The payments over the lease period will often include pre-payments of the acquisition of the asset so that the transaction occurs for no cash consideration, since the loan is fully repaid at this time.

If a further lease period is negotiated, then the new contract needs to be analysed to see whether it is a continuation of a financial lease or an operating lease.

15.18 Although a financial lease will typically be for several years, the duration of the lease does not determine whether the lease is to be regarded as an operating or financial lease. In some cases the asset may be leased for a short period, perhaps only one year at a time, but the contract includes the condition that the lessee takes all responsibility for the asset, including all maintenance and cover for exceptional damage. Even though the lease period is short, and even though the lessor may not be a financial institution, if the lessee accepts the majority of the risks associated with the use of the asset in production as well as the rewards, the lease is recorded as a financial and not an operating lease. However, in practice, it is difficult to deviate from the recording in the business accounts, which follows international business accounting standards, where financial leases are limited to leases covering the major part of the economic life time of the asset.

15.19 Any corporation that specialises in financial leasing, even if called a property company or aircraft leasing company, shall be classified as a financial intermediary offering loans to the units leasing assets from them. If the lessor is not a financial intermediary, the payments associated with the imputed loan are split into repayments of principal and interest only; if the lessor is a financial corporation, a further component representing the service charge (FISIM) is included.

15.20 Hire purchase is a type of financial leasing.

Definition: a hire purchase arrangement exists when a durable good is sold to a purchaser in return for agreed future payments. The buyer takes possession of the good immediately, though legally it remains the property of the lessor as collateral/guarantee until all agreed payments have been made by the lessee.

15.21 Hire purchase is usually restricted to consumer durables, and most purchasers are in the households sector. Financiers of hire purchase contracts typically are separate institutional units operating in close cooperation with sellers of durable goods

15.22 In the case of hire purchase, the durable good is recorded as if acquired by the purchaser on the day they take possession of the asset at the market price that would have been realised in an equivalent transaction. The purchaser receives an imputed loan of equivalent value. The payments from purchaser to financier are recorded as repayments of principal and interest payments, using the same method as the one applied for financial leasing. The productive activity carried out by financiers of hire purchase contracts is financial intermediation. As they do not usually charge directly for their services, their entire output are FISIM, calculated as property income receivable less interest payable. As in the case of conventional financial leasing, the amount of interest payable may be difficult to observe and must therefore be estimated.

Resource leases

15.23 *Definition:* a resource lease is one where the owner of a natural resource makes it available to a lessee in return for a payment recorded as rent.

15.24 In a resource lease, the resource asset remains on the balance sheet of the lessor even though it is used by the lessee. Any decline in value of a natural resource is recorded as an economic disappearance of non-produced assets (under K.21, 'depletion of natural resources'). It is not recorded as a transaction similar to consumption of fixed capital, as there is no fixed capital to consume. Payables due under a resource lease, and only such payables, are recorded as rent.

15.25 The classic case of an asset subject to a resource lease is land. However, the use of other natural resources is similarly recorded in this way, e.g. timber, fish, water, mineral resources and radio spectra.

Permits to use a natural resource

15.26 Permits to use a natural resource can be issued by government, but can also be issued by private owners, like farmers and businesses.

15.27 When permits are issued for using a natural resource, three recording options can be distinguished (see Table 15.3):

(a) the owner can extend or withhold permission to continued use of the asset from one lease period to the next;

(b) the owner may allow the resource asset to be used for an extended period of time in such a way that in effect the user controls the use of the resource during this time with little, if any, intervention from the owner;

(c) the owner permits the resource asset to be used to extinction.

The first option is recorded as a resource lease; this should be recorded as rent.

The second option may not only lead to a recording of rent but also to the creation of an asset for the user, distinct from the resource itself but where the value of the resource asset and the asset allowing use of it are linked.

This asset (category AN.222) is only recognised if its value, the benefits to the holder in excess of the value accruing to the issues, is realisable through transferring the asset. Such permits are first observed through economic appearance of assets (category K.1, see point (g) of paragraph 6.06). If the value of the asset is not realised it will tend towards zero as the lease period ends.

The third option results in the sale (or possibly an expropriation) of the natural resource itself.

Table 15.3 — The recording of three different types of permits for the use of natural resources

Type of use	Method of recording
Permission for temporary use, possibly for a long time	Resource lease: rent (property income)
Control by user during an extended period, risks and rewards borne by the user, transferability of permit at a realisable value	Rent and creation of new asset for the right to use the natural resource
Use to extinction; permanent use (all risks and rewards borne by the user)	Sale of natural resource

15.28 In order to distinguish between rent, creation of a new asset and sale of the natural resource, the major criterion is the transfer of risks and rewards. The natural resource is sold if all the risks and rewards have been transferred. A new asset is created if the transfer of risks and rewards results in a separate and transferable permit with a realisable value. Using other criteria, like pre-agreement on payments, up-front payment, length of the permit and treatment in the business accounts, can be misleading as they do not necessarily reflect the transfer of risks and rewards.

15.29 Natural resources, like land and mineral resources, may be acquired by non-residents. However, sale of natural resources is not to be recorded as being sold to a non-resident unit. In such cases a notional resident unit is created that holds the title to the natural resource; the non-resident unit then owns the equity of the notional resident unit. A similar recording applies in the case of the acquisition by residents of natural resources in the rest of world.

15.30 The revenues of the government from a specific type of natural resources (e.g. revenues from oil and natural gas) can consist of a wide range of transactions. Examples are:

(a) rent in case of resource leases;

(b) disposition of non-produced assets, e.g. sales of natural resources or sales of licences for exploiting during an extended period of time;

(c) dividend from a public corporation exploiting natural resources;

(d) corporation tax paid by corporations exploiting natural resources.

Permits to undertake specific activities

15.31 In addition to licences and leases to use an asset, permission may be granted to engage in a particular activity, quite independently of any assets involved in the activity. The permits are not dependent on qualifying criteria (such as passing an examination to qualify for permission to drive a car) but are designed to limit the number of individual units entitled to engage in the activity. Such permits may be issued by government or by private institutional units and different treatments apply to the two cases.

Table 15.4 — The recording of the use and purchase of non-financial assets, by type of transaction and flow

Type of transaction	Type of use/purchase and type of asset and type of payment
Intermediate consumption	Operating lease of produced assets, e.g. machines and intellectual property rights Regular payments by corporations for the delivery of water FISIM services related to the provision of a financial lease
Consumption of fixed capital	Only for produced assets, and for the economic owner
Final consumption expenditure	Operating lease of consumer durables Purchase of consumer durables, including when financed by a financial lease, or through a hire purchase agreement
Purchase of non-financial assets	
Fixed capital formation	Purchase of produced assets (including when financed via a financial lease)
Acquisition of natural resources	Purchase of a natural resource including the right to use to extinction Purchase of the right to use a natural resource for an extended period e.g. a fishing quota
Acquisition of other non-produced assets	Transferable time-share arrangements Purchase of a contract transferable to a third party Contracts for future production, for example contracts with footballers and writers
Payment as property income	Resource lease, i.e. payment for short-term use of natural resource
Rent	Regular payments for the right to extract water Financial lease, i.e. purchase of a non-financial asset financed simultaneously by a loan
Income transfer	Permits issued by government to undertake a specific activity not dependent on qualifying criteria, or with a disproportionate charge compared to the costs of administering the permit scheme Emission permits issued by the government to control total emissions

Type of transaction	Type of use/purchase and type of asset and type of payment
Other taxes on production	
Financial transaction: loan	Financial lease, i.e. purchase of a non-financial asset financed simultaneously by a loan
Other change in volume of assets	Exhaustion of natural resources by the owner Illegal logging, fishing or hunting (uncompensated seizure of cultivated assets or natural resources)
Change in the price of assets	Expiry of contracts, licences and permits recorded as assets

15.32 When governments restrict the number of cars entitled to operate as taxis or limit the number of casinos by issuing permits, for example, they are in effect creating monopoly profits for the approved operators and recovering some of the profits as the fee. Such fees are recorded as other taxes. This principle applies to all cases where government issues permits to limit the number of units operating in a particular field where the limit is fixed arbitrarily and is not dependent only on qualifying criteria.

15.33 In principle, if the permit is valid for several years, the payment shall be recorded on an accrual basis with another account receivable or payable entry for the amount of the permit fee covering future years.

15.34 The incentive to acquire such a permit is that the permit holder believes that he will thereby acquire the right to make monopoly profits through the future income being greater than the payments to acquire the rights to them. The benefit to the holder in excess of the value accruing to the issuer is treated as an asset if the permit holder can realise this by transferring the asset. The type of asset is described as a permit to undertake specific activities (AN.223).

15.35 The permit to undertake specific activities as an asset first appears in the other changes in the volume of assets account. Changes in value, both up and down, are recorded in the revaluation account.

15.36 The value of the permit as an asset is determined by the value at which it can be sold or, if no such figure is available, is estimated as the present value of the future stream of monopoly profits. If the permit is on-sold, the new owner assumes the right to receive a refund from the government if the permit is cancelled as well as the right to earn the monopoly profits.

15.37 A permit issued by government to undertake a specific activity is treated as an asset only when all the following conditions are satisfied:

(a) the activity concerned does not utilise an asset belonging to government; if it does, the permission to use the asset is treated as an operating lease, a financial lease, a resource lease or possibly the acquisition of an asset representing permission to use the asset at the discretion of the licensee over an extended period;

(b) the permit is not issued subject to a qualifying criterion; such permits are treated as either taxes or payments for services;

(c) the number of permits is limited and so allows the holder to make monopoly profits when undertaking the activity concerned;

(d) the permit holder must be able to sell the permit to a third party.

If any of the conditions is not satisfied, the payments are treated as taxes or as payments for services.

15.38 For units other than government, it is much less common to be able to limit the participation in a given activity. One instance is when it is either compulsory or desirable to belong to a professional association and there is a strict limit on numbers participating. An example is where an owner of property limits the number of units operating on his property, e.g. a hotel with a policy of only allowing one taxi firm to pick up guests. In these sorts of cases, the permits are treated as payments for services. In principle the payment shall be recorded on an accrual basis throughout the period for which the permit is valid. There is no reason in principle why such permits could not be treated as assets if they were marketable though this may not be a common situation.

15.39 A permit issued by a unit other than government to undertake a specific activity is treated as an asset only when all the following conditions are satisfied:

(a) the activity concerned does not utilise an asset belonging to the permit issuer; if it does, the permission to use the asset is treated as an operating lease, a financial lease or a resource lease;

(b) the number of permits is limited and so allows the holder to make monopoly profits when undertaking the activity concerned;

(c) the permit holder must be legally and practically able to sell the permit to a third party.

If any of the conditions are not satisfied, the payments are recorded as payments for a service.

15.40 Governments issue emission permits to control total emissions. Such permits do not involve the use of a natural asset, as no value is placed on the atmosphere, so it is not an economic asset and the permit fees are therefore classified as taxes. The permits are tradable and there will be an active market in them. The permits therefore constitute assets and shall be valued at the market price for which they can be sold.

Public-private partnerships (PPPS)

15.41 Public-private partnerships (PPPs) are long-term contracts between two units, whereby one unit acquires or builds an asset or set of assets, operates it for a period and then hands the asset over to a second unit. Such arrangements are usually between a private enterprise and government but other combinations are possible, with a public corporation as either party or a private NPI as the second party.

Governments engage in PPPs for a variety of reasons, such as the hope that private managements will lead to more efficient production and that access to a broader range of financial sources can be obtained and the wish to reduce government debt.

In the contract period the PPP contractor has the legal ownership. Once the contract period is over, the government has both economic and legal ownership.

More details about the treatment of PPPs are provided in Chapter 20 (government accounts).

Service concession contracts

15.42 Service concession contracts provide a company the exclusive right to provide certain services. For example, in case of a public service concession, a private company enters into an agreement with the government to have the exclusive right to operate, maintain and carry out investment in a public utility (such as a water supply system or a toll highway) for a given number of years. Service concession contracts shall not be recorded as assets where they are not transferable or no value can be realised through transferring them.

Marketable operating leases (AN.221)

15.43 Marketable operating leases are third-party property rights relating to non-financial assets other than natural resources. The lease should confer economic benefits to the holder in excess of the fees payable and the holder should be able to realise those benefits through transferring them. The value of the lease is the benefit to the holder in excess of the value accruing to the issuer. Marketing operating leases can include all kinds of rental and operating lease contracts. For example, a tenant can sublet an apartment to a third party.

Entitlements to future goods and services on an exclusive basis (AN.224)

15.44 Contracts for future production may also give rise to third-party property rights assets. The value of such contracts is the benefit to the holder in excess of the value accruing to the issuer. Examples are:

(a) exclusive rights to have a person work for them (e.g. football players) or to publish literary works or musical performances. The value of such rights is the profit that can be made on transferring the rights above the costs of cancelling the existing contract;

(b) time share arrangements. Only part of the time share arrangements has to be regarded as the acquisition of an asset:

(1) if the owner has a nominated space, available in perpetuity, is eligible to act as part of the management committee for the scheme, or can sell or bequeath the allocation at will, then the arrangement is most likely to be an asset of the same type as a house;

(2) if the owner has a fixed agreement to have some form of accommodation available at a given period for a fixed length of time, it is likely that this represents a pre-paid lease, i.e. pre-paid final consumption expenditure by households;

(3) this pre-paid lease could be sublet occasionally or sold for the rest of the period of the lease as a transferable operating lease;

(4) a participant in a points-based scheme may have an account that is receivable only by way of an asset.

CHAPTER 16

Insurance

Introduction

16.01 Insurance is an activity whereby institutional units or groups of units protect themselves against the negative financial consequences of specific uncertain events. Two types of insurance can be distinguished: social insurance and other insurance.

16.02 Social insurance is a scheme that covers social risks and needs. It is often organised collectively for a group; participation in the scheme is generally obligatory or encouraged by a third party. Social insurance comprises: social security schemes imposed, controlled and financed by the government; and employment-related schemes provided or operated by employers on behalf of their employees. Social insurance is described in Chapter 17.

16.03 Insurance other than social insurance covers against events such as death, survival in life, fire, natural disasters, flooding, car accidents, etc. Insuring against death and survival in life is known as life insurance, and insuring against all other events is known as non-life insurance.

16.04 This Chapter is concerned with life and non-life insurance. It describes how insurance activities are recorded in the accounts.

16.05 The rights and obligations of insurance are defined by an insurance policy. The policy is an agreement between an insurer and another institutional unit, called the policyholder. Under the agreement, the policyholder makes a payment called a premium to the insurer and when a specified event occurs, the insurer makes a payment called a claim to the policyholder or a nominated person. In this way, the policyholder protects against certain forms of risk; by pooling the risks the insurer aims to receive more from the receipt of premiums than it has to pay out as claims.

16.06 The insurance policy defines the roles of the parties involved, which are as follows:

(a) the insurer providing cover;

(b) the policyholder responsible for paying premiums;

(c) the beneficiary who receives compensation;

(d) the insured person or object that is subject to the risk.

In practice, the policyholder, the beneficiary and the insured can be the same person. The policy lists those roles and specifies the person corresponding to each role.

16.07 The most common form of insurance is called direct insurance, where institutional units insure themselves with an insurer against the financial consequences of specific risks. But direct insurers may in turn insure themselves, by insuring part of the directly insured risks with other insurers. This is called reinsurance, and the providers of this are called reinsurers.

Direct insurance

16.08 There are two types of direct insurance: life insurance and non-life insurance.

16.09 *Definition:* life insurance is an activity whereby a policyholder makes regular payments to an insurer in return for which the insurer guarantees to provide the beneficiary with an agreed sum, or an annuity, at a given date or earlier if the insured person dies beforehand. A life policy can grant benefits arising from a series of risks. For example, an old-age life insurance policy can grant a benefit when the insured becomes 65 years of age and, after the death of the insured, can grant a benefit to the surviving spouse until his death.

16.10 Life insurance also covers supplementary insurance against personal injury including incapacity for employment, insurance against death resulting from an accident and insurance against disability resulting from an accident or sickness.

16.11 Some classes of life insurance provide compensation in case the insured event occurs, e.g. insurance that is linked to a mortgage loan and only pays a benefit to redeem the mortgage if the income earner dies before maturity of the corresponding loan. Most of such classes contain a significant savings element combined with an element of risk coverage. Given the large savings element, life insurance is seen as a form of saving, and the corresponding transactions are recorded in the financial account.

16.12 *Definition:* non-life insurance is an activity whereby a policyholder makes regular payments to an insurer in return for which the insurer guarantees to provide the beneficiary with an agreed sum on the occurrence of an event other than the death of a person. Examples of such events are: accidents, sickness, fire, etc. Accident insurance that covers life related risks is classified as non-life insurance in most European countries.

16.13 A life policy that provides a benefit in the case of death within a given period but in no other circumstances, usually called term insurance, is regarded in the national accounts as non-life insurance because a claim is payable only if a specified contingency occurs and not otherwise. In practice, because of the way in which insurance units keep their accounts, it may not always be possible to separate term insurance from life insurance. In such circumstances, term insurance can be treated in the same way as life insurance.

16.14 Life and non-life insurance both involve spreading risk. Insurers usually receive small regular payments of premiums from policyholders and pay larger sums to claimants when the events covered by the policy occur. For non-life insurance, the risks are spread over the whole population that takes out the insurance policies. An insurer determines the premiums charged for providing an insurance service in a year according to the amount of claims it expects to pay in the same year. Typically, the number of claimants is much smaller than the number of policyholders. For an individual non-life policyholder there is no relationship between the premiums paid and the claims received, even in the long run, but the insurer establishes such a relationship for every class of non-life insurance on a yearly basis. For life insurance, a relationship between premiums and claims over time is important both to the policyholders and to the insurer. For someone taking out a life policy, the benefits to be received are expected to be at least as great as the premiums paid up until the benefit is due and is a form of saving. The insurer must combine this aspect of a policy with the actuarial calculations about the insured population concerning life expectancy, including the risk of fatal accidents, when determining the relationship between the levels of premiums and benefits. Further, in the interval between the receipt of premiums and the payment of benefits, the insurer earns income from investing a part of the premiums received. This income also affects the levels of premiums and benefits set by the insurers.

16.15 There are significant differences between life and non-life insurance that lead to different types of entries in the accounts. Non-life insurance consists of redistribution in the current period between all policyholders and a few claimants. Life insurance mainly redistributes premiums paid over a period of time as benefits paid later to the same policyholder.

Reinsurance

16.16 *Definition:* an insurer may protect against an unexpectedly large number of claims, or exceptionally heavy claims, by taking out a reinsurance policy with a reinsurer. Reinsurance corporations are concentrated in a limited number of financial centres, and so many of the reinsurance flows are transactions with the rest of the world. It is common for reinsurers to take out reinsurance policies with other reinsurers to spread their risks further. This extended reinsurance is called retrocession.

16.17 Limitation of risks can also be achieved when a group of insurers called underwriters jointly accept the risks associated with a single policy. Each individual insurer is only responsible for its own share of the policy, receives the corresponding share of the premium and pays the same share in the case of a claim or benefit paid. Management of the policy is either by the lead-manager or by the insurance broker. Lloyds of London is an example of an insurance market where direct and indirect risks are spread over a large number of underwriters.

16.18 Various options exist with the direct insurer to organise indirect coverage against the risks the insurer has accepted. The following classes of reinsurance are distinguished:

(a) proportionate reinsurance where the policyholder cedes to a reinsurer an agreed percentage of all risks, or of all risks of a specified portfolio of direct insurance policies. This means that the direct insurer transfers the corresponding percentage of the premiums to the reinsurer who then meets the same proportion of the claims when it incurs. In such cases, any reinsurance commission paid by the reinsurer to the policyholder is treated as a reduction in reinsurance premiums written;

(b) non-proportionate reinsurance known as excess of loss reinsurance, where the reinsurer is only at risk if the amount of the direct claim exceeds an agreed threshold. If there are no or few direct claims above the threshold, the reinsurer may pass a share of its profits to the direct insurer. Profit sharing is treated in the accounts as current transfer from the reinsurer to the direct insurer, in a similar way to the payment of claims.

The units involved

16.19 The institutional units involved in direct insurance and reinsurance are pre-eminently insurers. It is possible for another type of enterprise to carry out insurance as a non-principal activity, but usually the legal regulations surrounding the conduct of insurance mean that a separate set of accounts covering all aspects of the insurance activity must be kept, and so a separate institutional unit, classified to the insurance corporations (S.128) and pension funds (S.129) subsectors, is identifiable. Government may conduct other insurance activities, but again it is likely that a separate unit can be identified. Having noted that other sectors may be involved, in what follows it is assumed that insurers, either resident or non-resident, carry out all insurance.

16.20 Units that are primarily engaged in activities closely related to insurance, but do not themselves incur risks, are insurance auxiliaries. Such units are classified within the financial auxiliaries subsector (S.126) and include for example the following:

(a) insurance brokers;

(b) private non-profit institutions serving insurance enterprises and pension funds;

(c) units whose main activity is to act as supervisory authorities of insurance enterprises, pension funds and of insurance markets.

Output of direct insurance

16.21 The insurance company accepts a premium from a client and holds it until a claim is made or the period of the insurance expires. In the meantime, the insurance company invests the premium and the investment income is an extra source of funds from which to meet any claim due. The insurance company sets the level of the premiums to be such that the sum of the premiums plus the investment income earned on them less the expected claim will leave a margin that the insurance company can retain; this margin represents the output of the insurance company. The output of the insurance industry is measured reflecting the premium setting policies of the insurers. To that end, four separate items need to be defined. These are

(a) premiums earned;

(b) premium supplements;

(c) claims incurred, or benefits due;

(d) insurance technical reserves.

Each of these is discussed in turn before discussing the measurement of output for direct non-life insurance, direct life insurance and reinsurance respectively.

Premiums earned

16.22 *Definition:* premiums earned are the proportion of premiums written that have been earned during the accounting period. Premiums written cover the period contracted in the insurance policy. The difference between premiums written and premiums earned are amounts set aside, and included in the reserves for unearned premium. Such amounts are treated as assets of the policyholders. The concept of premium earned in insurance accounting is consistent with the accruals recording principle of national accounts.

16.23 The insurance premium is either a regular premium payable monthly or yearly, or a single premium paid usually at the start of the insured period. Single premiums are usual for the insurance of risks associated with large events, such as the construction of large buildings or equipments and the road, train, sea- or air transport of goods.

16.24 The premiums earned in the year in question take the following form:

premiums written

plus the reserves for unearned premiums at the beginning of the accounting year

less the reserves for unearned premiums at the end of the accounting year.

Or presented differently, it takes the form of:

premiums written

less the change (less increase or plus decrease) in the reserves for premiums unearned.

16.25 The reserves for unearned premiums and other reserves are included within non-life insurance technical reserves (AF.61) and life insurance technical reserves (AF.62). A description of insurance technical reserves is given in paragraphs 16.43 to 16.45.

16.26 Policyholders often have to pay a dedicated tax on payment of the insurance premium. Life insurance premiums are excluded from this insurance tax in many countries. As the insurers have to transfer this tax to government, the relevant amounts do not enter the annual accounts of insurers. Only a relatively small amount — the residual amount concerning the year that still has to be transferred to government — could enter the insurers' balance sheet under trade credit. The tax payments are not recorded as such in the accounts of insurers. Such a tax is treated as a tax on products in national accounts. Policyholders are assumed to pay such amounts directly into the tax authorities' accounts.

Premium supplements

16.27 *Definition:* premiums supplements are the income earned from the investment of the insurance technical reserves of the insurers, which represent liabilities towards the policyholders.

16.28 For life insurance in particular, but also to a lesser extent for non-life insurance, the total amount of benefits due or claims incurred in a given period often exceeds the premiums earned. Premiums are usually paid regularly, often at the start of an insurance period, whereas claims are incurred later, and in the case of life insurance benefits are often due many years later. In the time between the premium being paid and the claim being payable, the sum involved is at the disposal of the insurer to invest and earn income from it. Such amounts are called insurance technical reserves. The income earned on the reserves allows the insurers to charge lower premiums than would be the case otherwise. The measure of the service provided takes account of the size of this income as well as the relative size of premiums and claims.

16.29 For non-life insurance, even though a premium may be payable at the start of a period of cover, the premiums are only earned on a continuous basis as the period passes. At any point before the end of the cover, the insurer holds an amount due to the policyholder relating to services and possible claims to be provided in the future. This is a form of credit extended by the policyholder to the insurer described as unearned premiums. Similarly, although claims become due for payment by the insurer when the contingency specified in the policy happens, they may not be paid until some time later, often because of negotiation about the amounts due. This is another similar form of credit, described as reserves against claims outstanding.

16.30 Similar reserves exist for life insurance but in addition there are two other elements of insurance reserves, actuarial reserves for life insurance and reserves for with-profit insurance. They represent amounts set aside for payments of benefits in future. The reserves are generally invested in financial assets and the income is in the form of investment income. They may be used to fund economic activity such as real estate, to generate a net operating surplus either in a separate establishment or as a secondary activity.

16.31 All investment income attributed to policyholders is shown as payable to the policyholders in the primary distribution of income account. For non-life insurance, the same amount is then repaid to the insurer as premium supplements in the secondary distribution of income account. For life insurance, the premiums and premium supplements are shown in the financial account.

Adjusted claims incurred and benefits due

16.32 *Definition:* claims incurred and benefits due are the financial obligations of the insurers with respect to the beneficiary concerning the risks that the event realises in the period in question as defined by the policy.

16.33 The concept of claims incurred in non-life insurance and benefits due in life insurance is consistent with the accruals basis of measurement in national accounts.

Non-life insurance adjusted claims incurred

16.34 Claims can be distinguished between claims paid and claims incurred. Claims incurred refer to the amounts due from insured risks that have been realised in the year. Whether the policyholder has reported the corresponding event is irrelevant. Part of the claims will be paid in the next year or even later. On the other hand claims that are the effect of events that have occurred in previous years are paid in the current year. The unpaid part of the claims incurred is added to the reserve for claims outstanding.

16.35 Non-life insurance claims incurred in the calendar year take the following form:

claims paid

less the reserve for claims outstanding at the beginning of the accounting year

plus the reserve for claims outstanding at the end of the accounting year.

Or presented differently, they take the form of:

claims paid

plus the change (plus increase or less decrease) in the reserves for claims outstanding.

16.36 Any claims-related costs undertaken by the insurer, either external or internal, are not included in claims incurred. Such costs may consist of: costs of acquisition, policy management, investment management, and claims handling. Some costs might not be separately identifiable in the accounting source data. The external costs include expenditure for works that the insurer commissioned to another unit, thus recorded in the accounts as intermediate consumption. The internal costs include expenditure for works performed by the insurers' own employees, thus recorded in the accounts as labour costs.

16.37 In the event of catastrophes, the losses incurred shall not affect the value of claims. The catastrophic losses shall be recorded as a capital transfer from the insurer to the policyholder. The advantage of such recording is that the disposable income of the policyholder does not increase counter-intuitively as would be the case if the claims were recorded otherwise (see paragraphs 16.92 and 16.93).

16.38 The production of insurance services is a continuous process, not just when the risk occurs. However, the level of claims incurred by policyholders of non-life insurance varies from year to year and there may be events that cause a particularly high level of claims. Neither the volume nor the price of insurance services is directly affected by the volatility of claims. Insurers set the level of premiums on the basis of their own estimation of the likelihood of claims incurring. For this reason, the formula used for the calculation of output uses adjusted claims incurred, which is an estimate corrected for volatility in claims.

16.39 The estimate for adjusted claims incurred may be derived statistically in an expectations approach based on previous experience of the level of claims. In considering the past history of claims payable, however, allowance must be made for the share of such claims that is met under the terms of the direct insurer's reinsurance policy. For example, when the direct insurer has an excess of loss reinsurance, known as non-proportionate reinsurance, it sets the level of premiums to cover losses up to the maximum loss covered by its reinsurance policy plus the reinsurance premium it must pay. Under a proportionate reinsurance policy, it sets its premiums to cover the proportion of claims it has to pay plus the reinsurance premium.

16.40 An alternative method of adjusting claims incurred for volatility is to use accounting data on change in own funds and in equalisation reserves. The equalisation reserves are amounts that insurers set aside in compliance with legal or administrative requirements to cover irregular or unforeseeable large claims in the future. Such amounts are included within non-life insurance technical reserves (AF.61).

Life insurance benefits due

16.41 Life insurance benefits due are the amounts payable under the policy in the accounting period in question. No adjustment for unexpected volatility is necessary in the case of life insurance.

16.42 Any benefits-related costs shall not be included within the benefits due, but recorded as intermediate consumption and labour costs.

Insurance technical reserves

16.43 *Definition:* insurance technical reserves are the amounts that insurers set aside. The reserves are assets to the policyholders and liabilities to the insurers. The technical reserves can be distinguished between non-life and life insurance and annuities.

16.44 In accordance with Council Directive 91/674/EEC[1], seven types of technical reserves are distinguished. In each case the amount gross of reinsurance, the amount ceded to reinsurers and the net amount are shown in the balance sheet. The seven categories are as follows:

(a) reserve for unearned premiums — the difference between written premiums and earned premiums. This reserve can, depending on the national legislation, include a separate element relating to unexpired risks;

(b) reserves for life insurance — such reserves reflect the present value of the expected future benefits (including but not confined to declared bonuses) less the present value of future premiums. Supervisory authorities may set a ceiling to the discount rate used in the calculation of present value;

(c) reserve for claims outstanding — the difference between incurred and paid claims. It equals the total estimated ultimate cost to an insurance undertaking of settling all claims arising from events which have occurred up to the end of the financial year, whether reported or not, less amounts already paid in respect of such claims;

(d) reserve for bonuses and rebates (unless shown within the category referred to in point (b) — comprising the amounts intended for policyholders or contract beneficiaries by way of bonuses and rebates, to the extent that such amounts have not already been credited to policyholders or contract beneficiaries;

(e) equalisation reserve comprises amounts set aside in compliance with legal or administrative requirements to equalise fluctuations in loss ratios in future years or to provide for special risks. National authorities may not permit this reserve;

(f) other technical reserves comprise, inter alia, the reserve for unexpired risks if not included within the category referred to in point (a). This item might also include ageing reserves taking into account the effect of ageing on the amount of claims, e.g. with health insurance;

(g) technical reserves for life insurance policies where the investment risk is borne by the policyholders. This item shall comprise technical reserves constituted to cover liabilities to policyholders in the context of life insurance policies where the value of the return is determined by reference to investments for which the policyholder bears the risk, or by reference to an index, as is the case with index-linked life insurance. This item shall also comprise the technical reserves concerning tontines.

[1] Council Directive 91/674/EEC of 19 December 1991 on the annual accounts and consolidated accounts of insurance undertakings (OJ L 374, 31.12.1991, p. 7).

16.45 When deriving the changes in the insurance technical reserves (F.61 and F.62) used in the calculations of output, realised and unrealised holding gains and losses are not included.

Defining insurance output

16.46 Insurers provide an insurance service for their clients, but do not charge explicitly for their service.

16.47 The insurer collects premiums and pays claims or benefits on the occurrence of an insured event. The claims or benefits compensate the beneficiary for the financial consequences of the insured event.

16.48 The insurance technical reserves are funds that insurers use to invest and to earn income. Such funds and the corresponding investment income (premium supplements) are a liability towards the beneficiaries.

16.49 This section describes the information needed to calculate the output for direct insurance and reinsurance services.

Non-life insurance

16.50 The output of the insurer is the service provided to the beneficiaries.

16.51 If an expectations approach is being used, the formula to calculate output is:

premiums earned

plus premium supplements

minus adjusted claims incurred;

where adjusted claims incurred is corrected for the volatility in claims using historical data or accounting data on changes in the equalisation reserves and own funds. Premium supplements are less volatile than claims, and no adjustment for volatility is necessary. In estimating adjusted claims, information is broken down by product, for example motor insurance, buildings insurance, etc.

If the necessary accounting data are not available and the historical statistical data are not sufficient to allow reasonable average estimates of output to be made, the output of non-life insurance may be estimated as the sum of costs (including intermediate costs, labour and capital costs) plus an allowance for 'normal profit'.

Life insurance

16.52 The output of direct life insurance is calculated separately as:

premiums earned

plus premium supplements

minus benefits due

minus increases (plus decreases) in technical reserves and with-profits insurance.

16.53 If adequate data are not available for the calculation of life insurance according to this formula, an approach based on the sum of costs, similar to that described for non-life insurance, is to be used. As for non-life insurance, an allowance for normal profits is included.

16.54 In the calculation of output, holding gains and losses must not be included.

Reinsurance

16.55 The formula to calculate the output of reinsurance services is analogous to that for direct insurance. However, because the primary motivation of reinsurance is to limit the direct insurer's exposure to risk, a reinsurer deals with exceptionally large claims as a matter of normal business. For this reason, and because the market for reinsurance is concentrated in relatively few large firms worldwide, it is less likely that the reinsurer will experience an unexpectedly large loss than a direct insurer does, especially in the case of excess of loss reinsurance.

16.56 The output of reinsurance is measured in the same way as the output of direct non-life insurance. However, there are some payments peculiar to reinsurance. Such payments are commissions payable to the direct insurer under proportionate reinsurance and profit sharing in excess of loss reinsurance. Once these are taken into account the output of reinsurance is calculated as:

premiums earned *less* commissions payable

plus premium supplements

minus both adjusted claims incurred and profit sharing.

Transactions associated with non-life insurance

16.57 This section describes the set of entries recording the implications of a non-life insurance policy. Policies may be taken out by businesses, households as individuals and units in the rest of the world. However, when a policy taken out by a member of a household qualifies as social insurance, the entries required are as described in Chapter 17.

Allocation of insurance output among users

16.58 The output of non-life insurers is described in paragraph 16.51. The value of the output of insurers is recorded as a use as follows:

(a) intermediate consumption of businesses, including the following sectors: non-financial corporations (S.11), financial corporations (S.12), general government (S.13), households as employers (S.141) and own-account workers (S.142), or non-profit institutions serving households (S.15);

(b) final consumption expenditure of households as individuals (S.143 and S.144); or

(c) exports to non-resident policyholders (S.2).

16.59 The value of output is allocated to users according to the type of insurance.

16.60 Alternatively, the value of output is allocated as uses to policyholders in proportion to their actual premiums payable.

16.61 The allocation of output to intermediate consumption is broken down by industry.

Insurance services provided to and from the rest of the world

16.62 Resident insurers may provide insurance cover to households and businesses in the rest of the world, and resident households and businesses may purchase cover from insurers in the rest of the world. The investment income attributed by resident insurers to policyholders includes an allocation to policyholders in the rest of the world. Such non-resident policyholders then also pay premium supplements to the resident insurer.

16.63 Similar considerations also apply to the treatment of resident businesses and households taking out policies with non-resident insurers. Resident policy holders receive imputed investment income from abroad and pay premiums and supplements to abroad. Estimation of the size of such flows is difficult, especially when there is no resident insurer against which to make comparisons. Counterpart data may be used to make estimates for the national economy. The level of transactions by residents has to be known and the ratio of premium supplements to actual premiums in the economy providing the services can be used to estimate the investment income receivable and premium supplements payable.

The accounting entries

16.64 Altogether six pairs of transactions are recorded in respect of non-life insurance that is not part of social insurance; two pairs relating to the measurement of the production and consumption of the insurance service, three pairs relating to distribution and one in the financial account. Under exceptional circumstances, a seventh transaction relating to distribution may be recorded in the capital account. The value of the output of the activity, the investment income to be attributed to the policyholders and the value of the service charge are calculated specifically for non-life insurance in the manner described below.

16.65 The production and consumption transactions are as follows:

(a) since all such activity by resident institutional units is undertaken by insurers, the output (P.1) is recorded in the production account of insurers;

(b) the service may be consumed by any of the sectors of the economy or by the rest of the world; the value of the service is payable to insurers. Payments by business constitute intermediate consumption (P.2), recorded in their production account. Insurance payments by households as individuals are final consumption expenditure (P.3), recorded in the use of income account. Payments by the rest of the world are recorded as exports of services (P.62) in the external account of goods and services.

16.66 The distributive transactions are investment income attributed to policyholders in respect of non-life insurance, net non-life insurance premiums, and insurance claims:

(a) investment income from investing non-life insurance technical reserves is attributed to policyholders (D.441). Thus it is recorded as payable by insurers and as receivable by all sectors and the rest of the world. The investment income shall be allocated among policyholders in proportion of their non-life technical reserves, or alternatively in proportion to the actual premium written (payable). Both payables and receivables are recorded in the allocation of primary income account;

(b) net non-life direct insurance premiums (D.711) are the amounts of premiums and investment income used to finance expenditures of the insurers. Such premiums are calculated as premiums earned plus premium supplements less the output value of the insurers. Those net premiums are recorded as payable by all sectors of the economy or the rest of the world and as receivable by insurers. The allocation of net premiums between sectors is carried out according to the allocation of the output;

(c) non-life direct insurance claims (D.721) are amounts in respect of which insurers become liable to the policyholder when an event occurs. The insurance claims are recorded as receivable by all sectors of the economy and the rest of the world and as payable by the insurers. Both net premiums and claims are recorded in the secondary distribution of income account. Some claims arise because of damage or injuries that the policyholder causes to the property or persons of third parties. In such cases, valid claims are recorded as directly payable by the insurer to the injured parties and not indirectly via the policyholder;

(d) claims arising from catastrophic losses are other capital transfers (D.99) rather than current transfers, and they are recorded in the capital account as payable to policyholders by insurers;

(e) the financial balance sheet records the non-life insurance technical reserves (AF.61). Such reserves are recorded as liabilities of insurers and assets of all sectors and the rest of the world. The reserves consist of prepayments of premiums and payments of claims. A breakdown of this category is not required, although both components are needed in the calculation of premiums earned and claims incurred.

16.67 An example of the accounting records for such flows is shown in Table 16.1.

Table 16.1 — Non-life insurance

Uses											Resources								
	Corresponding entries of the		S.1	S.15	S.14	S.13	S.12	S.11			S.11	S.12	S.13	S.14	S.15	S.1	Corresponding entries of the		
Total	Goods and services account	Rest of the word account	Total economy	NPISHs	House- holds	General government	Financial corporations	Non-financial corporations		**Transactions and balancing items**	Non-financial corporations	Financial corporations	General government	House- holds	NPISHs	Total economy	Rest of the word account	Goods and services account	Total
										External account									
0		0							P.62	Exports in services								0	0
0	0								P.72	Imports in services							0		0
										Production account									
6	6								P.1	Out put		6				6			6
4		0	4	0	3	0	0	1	P.2	Intermediate consumption								4	4
										Distribution of primary income account									
6			6				6		D.441	Property income attributable to insurance policy holders	5	0	0	1	0	6	0		6
										Secondary distribution of income account									
44		1	43	0	31	4	0	8	D.711	Net non-life insurance premiums		44				44			44
45		0	45				45		D.721	Non-life insurance claims	6	0	1	35	0	42	3		45
										Use of disposable income account									
2			2		2				P.3	Final consumption expenditure								2	2
										Financial balance sheet (opening)									
74		0	74	0	40	0	9	25	AF.61	Non-life insurance technical reserves		74				74			74
										Financial balance sheet (closeing)									
81		0	81	0	44	0	11	25	AF.61	Non-life insurance technical reserves		81				81			81
										Financial transation									
7		0	7	0	4	0	2	1	F.61	Non-life insurance technical reserves		7				7			7
										Revaluation account									
0		0	0	0	0	0	0	0	AF.61	Non-life insurance technical reserves		0				0			0

Transactions of life insurance

16.68 This section describes how records for life insurance differ from non-life insurance records. For a life insurance policy the benefits from the policy are treated as changes in wealth, recorded in the financial account. For a policy qualifying as social insurance, the benefits in the form of pensions are recorded as income in the secondary distribution of income account. The reason for the different treatment is that a policy other than social insurance is entered into entirely on the initiative of the policyholder. Policies that qualify as social insurance reflect the intervention of a third party, usually the government or the employer, to encourage or oblige the policyholder to make reserve for income in retirement. Social insurance is described in Chapter 17.

16.69 The holder of a life insurance policy is an individual classified within the households sector (S.143 or S.144). If a company takes out an insurance policy on the life of an employee, this is term insurance and not life insurance. Life insurance transactions therefore take place only between insurers (classified within the insurance corporations subsector — S.128) and resident households as individuals (S.143 and S.144), unless exported to non-resident households (classified within the rest of the world sector — S.2). The output value of life insurance is matched by the value of the households' final consumption expenditures and exports in services, following the same approach as for non-life insurance. The investment income attributed to insurance policyholders is treated as premium supplements. However, premiums and claims are not shown separately in the case of life insurance and are not treated as current transfers. Rather they constitute components of a net transaction recorded in the financial account, the financial asset involved being life insurance and annuities entitlements.

16.70 Four pairs of transactions are recorded in the accounts; two pairs relate to production and consumption of the insurance service, one pair shows the attribution of investment income to the policy holders and one pair shows the change in life insurance and annuities entitlements:

(a) the output (P.1) of the life insurance is recorded in the production account for the insurers;

(b) the value of the services consumed is recorded as final consumption expenditure (P.3) by households in the use of disposable income account or as payable by the rest of the world, treated as exports of services (P.62) to non-resident households. Payments by households to non-resident insurers are imports of services (P.72);

(c) investment income earned from investing life insurance technical reserves attributed to policyholders (D.441) is recorded in the allocation of primary income account. Bonuses declared in connection with life policies are treated as being distributed to policyholders even if they exceed the investment income earned by the institution declaring the bonus. The investment income is recorded as payable by insurers and receivable by resident households or non-resident households in the rest of the world. The investment income shall be allocated among policyholders in proportion to their life technical reserves, or, if that information is not available, in proportion to the premiums written;

(d) the financial balance sheet holds entries for life insurance technical reserves and annuity entitlements (AF.62). Such reserves are recorded as liabilities of insurers and assets of households and the rest of the world. These amounts reflect the savings character of life insurance policies. This includes the prepayment of premiums and the payment of benefits. A breakdown of this category is not required, although both components are needed in the calculation of premiums earned and benefits due.

16.71 Life insurance technical reserves and annuities entitlements reflect policies that yield a lump sum at a given date. The lump sum may be used to purchase an annuity that itself converts a lump sum into a stream of payments. The conditional entitlements of the individual policyholders — the amount receivable at or after maturity as a lump sum payment or an annuity — do not aggregate to the value of the insurer's obligations. The difference is derived from the conditionality and the present value calculation. The amount to be reported under life insurance and annuity entitlements' is defined according to the insurers' accounting principles.

16.72 An example of such flows is shown in Table 16.2.

Table 16.2 — Life insurance

Uses or assets: Total	Corresponding entries of the: Goods and services account	Corresponding entries of the: Rest of the word account	S.1 Total economy	S.15 NPISHs	S.14 House-holds	S.13 General government	S.12 Financial corporations	S.11 Non- financial corporations		Transactions and balancing items	S.11 Non- financial corporations	S.12 Financial corporations	S.13 General government	S.14 House-holds	S.15 NPISHs	S.1 Total economy	Corresponding entries of the: Rest of the word account	Corresponding entries of the: Goods and services account	Resources or liabilities: Total
										External account									
0		0							P.62	Exports in services								0	0
0	0								P.72	Imports in services							0		0
										Production account									
4	4								P.1	Out put		4				4			4
										Distribution of primary income account									
7			7				7		D.441	Property income attributable to insurance policy holders				7		7	0		7
										Use of disposable income account									
4		0	4		4				P.3	Final consumption expenditure								4	4
										Financial balance sheet (opening)									
221		0	221		221				AF.62	Life insurance technical reserves		221				221			221
										Financial balance sheet (closeing)									
243		0	243		243				AF.62	Life insurance technical reserves		243				243			243
										Financial transation									
22		0	22		22				F.62	Life insurance technical reserves		22				22			22
										Revaluation account									
0		0	0		0				AF.62	Life insurance technical reserves		0				0			0

Transactions associated with reinsurance

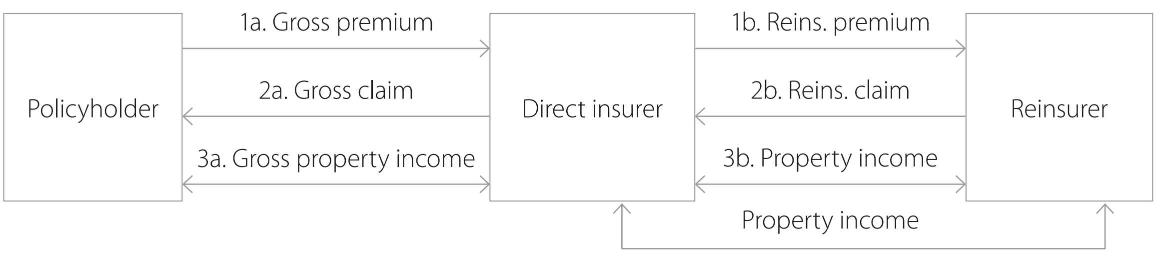
16.73 Accounts of reinsurers are largely the same as the accounts of direct insurers. The only difference is that direct insurance transactions with policyholders who are not themselves providers of insurance are replaced by insurance transactions between reinsurers and direct insurers.

16.74 Insurance transactions are recorded gross of reinsurance. Premiums are first payable to the direct insurer who may then pay a proportion of the premium to the reinsurer (cession), who might then pay a smaller amount to another reinsurer, and so on (retrocession). Analogously, the same applies to claims or benefits. The gross treatment is in line with the original policyholder's point of view. This policyholder normally is not aware of any amount ceded by the direct insurer to a reinsurer and, should the reinsurer go bankrupt, the direct insurer remains liable to pay the full amount of the claims on ceded risks.

16.75 The output of direct insurance is calculated gross of reinsurance. The alternative calculation net of reinsurance would be to show part of the direct policyholders' premiums being paid to the direct insurer and part to the reinsurer, but this way of recording, called 'net recording', is not allowed.

Chart 1 below illustrates this process.

Chart 1 — Flows between policyholders, direct and indirect insurers



16.76 Chart 1 summarises the following flows:

1 the policyholder makes the payment of the premium gross of reinsurance to the direct insurer (1a), of which the reinsurance part of the gross premium is ceded to the reinsurer (1b);

2 similarly, the payment of claim is recorded, but in the opposite direction. The claim is paid by the reinsurer to the direct insurer (2b). The direct insurer adds to this amount its own claim paid further to the policyholder (2a);

3 both the direct insurer and the reinsurer earned property income from investing their technical reserves. Property income is transferred by the reinsurer to the direct insurer (3b) who then adds this amount to its own property income earned and further distributes to the policyholder (3a).

16.77 All gross flows between the policyholder and the direct insurer include the corresponding amounts of the flows between the direct insurer and the reinsurer; for this reason these arrows are shown as being thicker in the chart.

16.78 As with direct insurance, for example following a catastrophic disaster, part of reinsurance claims are recorded as capital transfers rather than as current transfers.

16.79 The whole of the output of the reinsurer is intermediate consumption of the direct insurer holding the reinsurance policy. As noted above, many reinsurance policies are between insurers resident in different economies. Thus, the value of the output in such cases represents imports by the insurer taking out the reinsurance policy and exports by the reinsurer.

16.80 The recording of flows associated with reinsurance resembles the recording for non-life insurance except that the policyholder of a reinsurance policy is always another insurer.

16.81 The production and consumption transactions are as follows:

(a) the output (P.1) is recorded in the production account of reinsurers. Reinsurance services are often provided by non-resident reinsurers and in such cases are recorded as imports of services (P.72);

(b) the service of the reinsurer can only be consumed by a direct insurer or another reinsurer. If the policyholder is resident, the use of the reinsurance service is recorded as intermediate consumption (P.2) of the policyholder unit. Where the policyholder is non-resident, the use is recorded as exports of services (P.62).

16.82 The distributive transactions cover investment income attributed to policyholders in respect of reinsurance, net reinsurance premiums and reinsurance claims:

(a) investment income (D.441) earned by reinsurers from investing reinsurance technical reserves is payable to policyholders who can be direct insurers or reinsurers. Both reinsurance and direct insurers may be resident or non-resident;

(b) net non-life reinsurance premiums (D.712) are payable by policyholders and receivable by reinsurers. Either of the units due to make the payment or to receive it may be non-resident;

(c) non-life reinsurance claims (D.722) are payable by reinsurers and receivable by policyholders, either resident or non-resident. Both net premiums and claims are recorded in the secondary distribution of income account;

(d) the financial balance sheet holds records reflecting the reinsurance technical reserves (under AF.61, 'non-life insurance technical reserves'). Such reserves are recorded as liabilities of reinsurers and assets of policyholders. Such policyholders can be direct insurers or reinsurers.

16.83 Commissions payable by reinsurers to the insurer as the reinsurance policyholder are treated as reductions in the premiums payable to the reinsurers. Profit sharing payable by the reinsurer to the direct insurer is recorded as a current transfer. Although they are recorded differently, both commissions payable and profit sharing reduce the output of the reinsurer.

16.84 If direct insurance claims are treated as capital and not current transfers, the reinsurance claims for the same event are also treated as other capital transfers (D.99).

Transactions associated with insurance auxiliaries

16.85 The output of auxiliary insurance services is valued on the basis of the fees or commissions charged. In the case of non-profit institutions operating as business associations for insurance enterprises and pension funds, their output is valued by the amounts of subscriptions paid by the members of the associations. This output is used as intermediate consumption by the members of the associations.

Annuities

16.86 The simplest case of a life insurance policy is one where a stream of payments is made by the policyholder to the insurer over time in return for a single payment received as a claim at some point in the future. With the simplest form of annuity, the equivalent to the policyholder, called the annuitant, pays a single lump sum to the insurer and in return receives a stream of payments either for a nominated period or for the rest of the annuitant's life, or for the rest of the life of both the annuitant and a nominated other person.

16.87 Annuities are organised by insurers and are a means of risk management. The annuitant avoids risk by agreeing to accept a known payment stream, known either in absolute terms or subject to a formula, such as being index-linked, in return for a single payment. The insurer takes the risk of making more from investing the single payment than is paid to the annuitant as a payment stream. Life expectancy is taken into account in determining the stream of payments.

16.88 When an annuity is initiated, there is a transfer of funds from the household to the insurer. In many cases, however, this may simply be a 'rollover' from a lump sum payable by that or another insurer from the maturing of a normal life insurance policy immediately into an annuity. In such a case there is no need to record the payment of the lump sum and the acquisition of the annuity; there will simply be a change from life insurance reserves to annuity reserves in the insurer and pension fund subsector. If an annuity is purchased independently of the maturing of a life insurance policy, this is recorded as a pair of financial transactions between the household and the insurer. The household makes a payment to the insurer and receives in return an asset arising from the terms of the annuity. The insurer receives a financial asset from the household and incurs a liability towards it.

16.89 Annuities are terminated by death, at which point any remaining reserves for that annuitant are transferred to the insurer. However, assuming the insurer has predicted life expectancy accurately, for the group of annuitants as a whole, the average funds remaining at death will be zero. If life expectancies change, revisions to the reserves must be made. For annuities in operation, an extension of life expectancies will reduce the amount available to the insurer as a service charge, possibly making this negative. In such a case, the insurer will have to draw on its own funds and hope to build them up again in future by associating higher service charges with new annuities.

Recording non-life insurance claims

Treatment of adjusted claims

16.90 The time of recording claims incurred is generally when the related event occurs. This principle is applied even when, in the case of disputed claims, the settlement may take place years after the event concerned. An exception is made in cases where the possibility of making a claim is recognised only long after the event has happened. For example, an important series of claims were recognised only when exposure to asbestos was established as a cause of serious illness and was judged to give rise to claims under an insurance policy valid at the time of the exposure. In such cases the claim is recorded at the time that the insurance company accepts the liability. This may not be the same time as when the size of the claim is agreed on or when the claim is paid.

16.91 Given that the formula for output uses adjusted claims and not actual claims, only when the actual claims happen to be the same values as expected claims will net premiums and claims be equal in a given period. They should however be approximately equal over a period of years excluding a year in which a disaster is recorded.

Treatment of catastrophic losses

16.92 Claims are recorded as current transfers payable by the insurer to the policyholder. There is one case where claims are recorded as other capital transfers (D.99) rather than current transfers and that is in the wake of a major catastrophe. The criteria for when the effects of a disaster should be treated like this must be determined according to national circumstances, but these may involve the number of policyholders affected and the amount of the damage done. The rationale for recording the claims as capital transfers in this case comes from the fact that many of the claims will relate to destruction or serious damage to assets such as dwellings, buildings and structures.

16.93 Following a catastrophe, the total value of the claims in excess of the premiums is recorded as a capital transfer from the insurer to the policyholder. Information on the level of claims to be met under insurance policies is obtained from the insurance industry. If the insurance industry cannot provide this information, one approach to estimating the level of the catastrophe-related claims is to take the difference between the adjusted claims and the actual claims in the period of the catastrophe.

CHAPTER 17

Social insurance including pensions

Introduction

17.01 *Definition:* social insurance schemes are schemes in which participants are obliged, or encouraged, by a third party to take out insurance against certain social risks or circumstances that may adversely affect their welfare or that of their dependants. In such schemes, social contributions are paid by employees or others, or by employers on behalf of their employees, in order to secure entitlement to social insurance benefits, in the current or subsequent periods, for the employees or other contributors, their dependents or survivors. Contributions to social insurance schemes can also be paid by, or on behalf of, self-employed or non-employed persons.

17.02 There are two types of social insurance schemes:

(a) the first consists of social security schemes covering the entire community, or large sections of the community, that are imposed, controlled and financed by government units. Pensions payable under such schemes may or may not be related to levels of salary of the beneficiary or history of employment. Non-pension benefits are less frequently linked to salary levels;

(b) the second type consists of other employment related schemes. Such schemes derive from an employer-employee relationship in the provision of pension, and possibly other, entitlements that are part of the conditions of employment and where responsibility for the provision of benefits does not devolve to general government under social security provisions.

17.03 The scope of social insurance schemes varies from country to country, and from scheme to scheme within the same country. Examples of such schemes are the following:

(a) general government obliges all employees to participate in a social security scheme;

(b) employers make it a condition of employment that employees participate in an insurance scheme specified by the employer;

(c) an employer encourages employees to join a scheme by making contributions on behalf of the employee;

(d) a trade union arranges advantageous insurance cover available only to the members of the trade union; or

(e) the schemes other than social security may be arranged with an insurance corporation as a group policy or series of policies, or they may be managed by an insurance corporation in return for a fee. Alternatively, the schemes may be managed by an employer directly on his own behalf or by employers on behalf of their employees and their dependants or by others on behalf of a specified group.

Table 17.1 — Social insurance schemes

Type of insurance	Characteristics	Form of organisation	Sector/subsector
Social security	The participants are obliged by general government to insure against certain social risks	Organised by general government via social security funds	Social security funds (S.1314)
Employment-related social insurance schemes other than social security	Employers can make it a condition of employment that employees insure against certain social risks	Organised by employers on behalf of their employees and their dependents or by others on behalf of a specified group	Sector or subsector of employer, insurance corporations and pension funds or non-profit institutions serving households

Social insurance schemes, social assistance and individual insurance policies

17.04 Social assistance is not part of social insurance. Social assistance benefits are payable independently of participation in a social insurance scheme, i.e. without qualifying contributions having been made to a social insurance scheme.

17.05 Social assistance is distinguished from social security, by the eligibility to receive social assistance benefits from general government, and is not dependent on having elected to participate as demonstrated by the payment of contributions. Usually all members of resident households are entitled to apply for social assistance but the conditions under which it is granted are often restrictive. Frequently there is an assessment of available income including social insurance benefits, in relation to the perceived needs of a household. Only those households falling below a given threshold may be entitled to this type of social assistance.

17.06 Individual insurance policies qualify as social insurance schemes if they cover social risks and needs such as sickness and old age. In order for an individual policy to be treated as part of a social insurance scheme, the eventualities or circumstances against which the participants are insured shall correspond to the risks or needs listed in paragraph 4.84; in addition, one or more of the following conditions shall be satisfied:

(a) participation in the scheme is obligatory either by law or under the terms and conditions of employment of an employee, or group of employees;

(b) the scheme is collective and is operated for the benefit of a designated group of workers, whether employees, self-employed or non-employed, participation being restricted to members of that group;

(c) an employer makes a contribution (actual or imputed) to the scheme on behalf of an employee, whether or not the employee also makes a contribution.

17.07 Insurance claims on policies taken out with the sole purpose of obtaining a discount, even if those policies follow from a collective agreement, are excluded from social insurance. Such individual insurance policies are recorded as life and non-life insurance. Insurance claims based on policies taken out solely on the own initiative of the insured, independently of his employer or government, are also excluded from social insurance.

Social benefits

17.08 Social benefits become payable when certain events occur, or certain conditions exist that may adversely affect the welfare of the households concerned either by imposing additional demands on their resources or reducing their incomes. Social benefits are provided in cash or in kind. There are a number of circumstances in which social benefits are payable:

(a) the beneficiaries, or their dependants, require medical, dental or other treatment, or hospital, convalescent or long-term care, as a result of sickness, injuries, maternity, chronic invalidity, old age, etc. The social benefits may be provided in kind in the form of treatments or care provided free or at prices that are not economically significant, or by reimbursing expenditures made by households. Social benefits in cash may also be payable to beneficiaries needing health care;

(b) the beneficiaries have to support dependants of various kinds: spouses, children, elderly relatives, invalids, etc. The social benefits are usually paid in cash in the form of regular dependants' or family allowances;

(c) the beneficiaries suffer a reduction in income as a result of not being able to work full-time or work at all. The social benefits are usually paid regularly, in cash, and for the duration of the condition. In some instances a lump sum may be provided additionally or instead of the regular payment. Examples of why people may be prevented from working are as follows:

(1) voluntary or compulsory retirement;

(2) involuntary unemployment, including temporary lay-offs and short-time working;

(3) sickness, accidental injury, the birth of a child, etc., that prevents a person from working, or working full time;

(d) the beneficiaries receive payments to compensate for suffering a reduction in income because of the death of the main income earner;

(e) the beneficiaries are provided with housing either for free or at prices that are not economically significant or by reimbursing expenditure made by households. Such items are social benefits in kind;

(f) the beneficiaries are provided with allowances to cover education expenses incurred on behalf of themselves or their dependants. Education services may be provided as social benefits in kind.

Social benefits provided by general government

17.09 General government provides social benefits as payments under social security, social assistance or social transfers in kind.

17.10 Social security refers to social insurance schemes operated by general government.

17.11 The definition of social benefits includes the provision of health and education services. Typically general government makes such services available to all members of the community without requiring participation in a scheme or qualifying requirements. The services are treated as social transfers in kind and not as part of social security or social assistance. In addition to health and education services provided by general government, such services may also be provided to individuals by non-profit institutions serving households. Such services are also treated as social transfers in kind and not as part of social insurance schemes.

Social benefits provided by other institutional units

17.12 Social benefits can be provided by employers to their employees and their dependents or provided by other units such as trade unions. All social benefits provided by units other than general government are made under a social insurance scheme.

Pensions and other forms of benefit

17.13 Social insurance benefits and the corresponding contributions are divided between those relating to pensions and those relating to all other forms of benefit. The most important pension benefit covered by social insurance schemes is income in retirement, but there are other examples. For instance, pensions may be payable to widows and widowers or to people who suffer an industrial injury and are no longer able to work. The main income earner is no longer able, through death or incapacity, to provide an income, and so payments are made and recorded as pensions.

17.14 All other benefits are grouped together as non-pension benefits. The distinction between pension and non-pension benefits is important because liabilities are recorded for pensions whether there are actually assets set aside to meet the entitlements or not, but reserves are recorded for non-pension benefits only when the reserves actually exist.

Social insurance benefits other than pensions

17.15 *Definition:* other social insurance benefits, or non-pension benefits, are benefits which beneficiaries receive, directly or indirectly, depending on specific events and usually under predetermined legal or contractual terms.

Excluding income in retirement, a number of other contingencies may be covered such as health insurance, unemployment insurance and long-term care insurance benefits.

17.16 Other social insurance benefits are provided to beneficiaries under social security and under employment-related schemes other than social security.

Social security schemes other than pension schemes

17.17 *Definition:* social security schemes other than pension schemes are contractual insurance schemes where the beneficiaries as participants of a social insurance scheme are obliged by general government to insure against risks other than old age and other age-related risks. Social security benefits other than pension benefits, known as non-pension benefits, are provided to beneficiaries by general government.

17.18 Beneficiaries usually make compulsory contributions towards a social security scheme other than a social security pension scheme which is frequently financed on a pay-as-you-go basis. Pay-as-you-go contributions in a period are used to finance the benefits in the same period. There is no saving element involved, either for general government or the employer operating the scheme or for the beneficiaries participating in it. So there is generally no question of a surplus arising and, if there is a shortfall in resources, government may have powers to change the commitments not just relating to future employment but also for past employment. However, in some countries social security schemes other than pension schemes may accumulate reserves, known as buffer funds.

17.19 Social security entitlements other than pension entitlements, as outstanding amounts for a social security scheme, are not recognised in the core national accounts of the ESA. Estimates of the outstanding amounts of entitlements under social security schemes other than pensions, as well as of any other employment-related non-pension schemes provided by general government, are not included in the core accounts and not recorded in Table 17.5.

Other employment-related social insurance schemes

17.20 *Definition:* other employment-related social insurance schemes are contractual insurance schemes, either compulsory by law or encouraged by a third party. In other employment-related social insurance schemes employers can make it a condition of employment that employees, the beneficiaries, participate in a social insurance scheme specified by the employer to insure against risk other than old age and age-related. Such employment-related schemes are provided to beneficiaries either by the employer or by other units on behalf of the employer.

17.21 Other employment-related social insurance schemes are seen, like related pension schemes, as part of the compensation package, and negotiations between employees and employers may focus on current conditions of service and pay scales. Often social insurance benefits other than pensions are provided by private employers from schemes that the employers control or contract to a third party such as an insurance corporation providing social benefits like private medical coverage.

Recording of stocks and flows by type of non-pension social insurance scheme

Social security schemes

17.22 In recognition of the fact that social security is normally financed on a pay-as-you-go basis, entitlements accruing under social security such as social benefits including pensions are not shown in the core national accounts.

17.23 Pension entitlements arising from social security schemes are included in the supplementary table for accrued-to-date pension entitlements in social insurance, but this is not the case for entitlements arising from social security schemes, other than pension schemes.

17.24 The recording of the flows for social security schemes other than pensions refers to contributions made by the employer and by the employees and to social security benefits.

17.25 Any contribution made by the employer is treated as part of compensation of employees. It is recorded as a distributive transaction payable by the employer and receivable by the employee. The employee then pays an amount equal to what he receives from the employer together with any contribution of his own to the social security fund. This amount is recorded as a use for households and a resource for government.

17.26 Any contributions made by self-employed or non-employed persons are also included with the contributions by households to government.

17.27 Social security benefits are recorded as distributive transactions, from general government to households.

17.28 Table 17.2 shows the transactions related to a social security pension scheme. They are identical to the transactions related to social security schemes excluding pensions.

Other employment-related non-pension social insurance schemes

17.29 For other employment-related non-pension social insurance schemes, entitlements of the participants are usually recorded as they build up. Investment income earned on existing entitlements is recorded as being distributed to the beneficiaries and reinvested by them in the scheme.

17.30 The social contribution made by an employer to an insurance scheme on behalf of an employee is treated as part of the compensation of employees.

17.31 The investment income on accumulated entitlements is recorded as being distributed to households by the scheme. The investment income includes interest and dividends plus, if the institutional unit holds shares in them, the distributed income of collective investment schemes. It is possible that the scheme may own property and so generate a net operating surplus, and this is included with the investment income distributed to the beneficiaries. In that case, the term investment income is to be interpreted as including that source of income. Holding gains and losses generated by the investment of the cumulated entitlements are not included in investment income but are recorded as other changes due to revaluations.

17.32 Part of the income distributed to households is used to meet the costs of operating the scheme. This cost is shown as output of the scheme and household final consumption expenditure. The remaining part of the distributed income is treated as contribution supplements paid back by households to the scheme.

17.33 Social contributions are shown as paid by households to the scheme. The total amount of the social contributions is made up of the actual contributions from the employers as part of compensation of employees, actual contributions by employees and by individuals formerly participating in a scheme, self-employed and non-employed persons as well as retirees, and the contribution supplements specified in paragraph 17.32.

17.34 Those who contribute to a social insurance scheme, who are not employees, may be self-employed or non-employed persons, who participate by virtue of their profession or former employment status.

17.35 The social benefits paid to households by the scheme administrator are shown as distributive transactions under other social insurance benefits.

17.36 The payment of the service provided by the scheme administrator, equal to the value of the scheme's output, is recorded as final consumption expenditure of households.

17.37 An increase in entitlements caused by an excess of contributions over benefits is shown as paid by the social insurance scheme to households. The rationale for this is that, since this increase in entitlements directly affects the net worth of households, it should be included in the saving of the households sector.

17.38 The adjustment for the change in the entitlements paid by the scheme to households is recorded as a claim from households to the scheme.

17.39 Table 17.3 shows the transactions for an employment-related pension scheme. They are identical to the transactions related to social insurance schemes other than pension schemes.

Pensions

17.40 *Definition:* social insurance pensions are benefits which beneficiaries receive upon retirement, usually under predetermined legal or contractual terms and typically in the form of a guaranteed annuity.

The most important pension benefit of social insurance schemes is income in retirement, but a number of other cases may also occur. For example, pensions may be payable to widows and widowers or to people who suffer an industrial injury and are no longer able to work. All events that give rise to payments because the income earner is no longer able, through death or incapacity, to provide an income for himself or herself and dependants are treated as pensions.

Types of pension schemes

17.41 Pensions provided to beneficiaries can take the following forms:

(a) social insurance pension schemes;

(b) social assistance; and

(c) individual insurance policies related to pensions.

They are usually provided by social security funds, other government entities, insurance corporations and pension funds, or institutional units as employers. However, other institutions could be involved, depending on national circumstances. The use of the term social security funds does not mean that there is always an actual fund of assets created within the scheme. Social security funds and social security schemes are synonymous terms.

17.42 Social insurance pensions are provided to beneficiaries as participants in social insurance schemes. The part provided by general government is called social security pensions, including social security funds, and the part provided by other units is called other employment-related pensions. The division between which pensions are provided by social security and which by other employment-related schemes varies considerably from country to country with the consequence that the coverage, and therefore national perceptions, of the term 'social security' vary considerably.

Social security pension schemes

17.43 *Definition:* social security pension schemes are contractual insurance schemes where the beneficiaries as participants of a social insurance scheme are obliged by general government to insure against old age and other age-related risks such as disability, health etc. Social security pensions are provided to beneficiaries by general government.

17.44 When general government takes over the responsibility for providing pensions to large sections of the community, the social security function is in effect filling the role of a multi-employer scheme.

17.45 Beneficiaries usually make compulsory contributions towards a social security pension scheme which is frequently financed on a pay-as-you-go basis. The contributions in a period are used to finance the benefits in the same period. There is no saving element involved, either for general government or the employer operating the scheme or for the beneficiaries participating in it. So a surplus on the scheme will not exist, and, if there is a shortfall in resources, government may have powers to change the commitments not just relating to future employment but also for the past. In some countries however social security pension schemes may accumulate reserves, known as buffer funds.

17.46 The narrowest form of social security pension is very basic. The level may be fixed independently of the size of contributions, though not of the fact that contributions have been made for a given period of time or under other specific conditions. An employee's right to a pension under social security is often transferable from one employer to another.

17.47 By contrast, in some countries most or all pension provision may be made via social security. In this case, government acts as an intermediary for employers so that once the government has received the contributions to the scheme paid by the employer and the households; the government then takes on the risk of making the eventual payment. Government relieves the employer of the risk that the cost of pensions may be too great for his enterprise to meet and assures the population that pensions will be paid, though it may do so with the qualification that it may alter the amount of pensions due, even retrospectively.

17.48 Pension entitlements as outstanding amounts for a social security pension scheme are not recognised in the core national accounts of the ESA. Estimates of the outstanding amounts of entitlements under social security pension schemes as well as of any other employment-related defined benefit pension scheme provided by general government are not included in the core national accounts but are recorded in the supplementary table for accrued-to-date pension entitlements shown in Table 17.5.

Other employment-related pension schemes

17.49 *Definition:* other employment-related pension schemes are contractual insurance schemes, either compulsory by law or encouraged by government, or where employers make it a condition of employment that employees (the beneficiaries) participate in a social insurance scheme specified by the employer to insure against old age and other age-related risks. These employment-related pensions are provided to beneficiaries either by the employer or by other units on behalf of the employer.

17.50 Unless employers and beneficiaries agree to change the amounts payable, pension schemes run by private employers are usually not subject to retrospective adjustments. However there is a risk that the employer may be unable to pay because he has gone out of business. Protection for the pension entitlements of individuals is becoming more common. The pension built up with one employer may not be transferable to a new employer. Employer schemes are increasingly likely to have reserves set aside. Even if there are no reserves, accounting conventions may require them to recognise pension entitlements of present and past employees in their accounts.

17.51 Other employment-related pensions are seen as part of the compensation package, and negotiations between employees and employers may focus on current conditions of service and pay scales and pension entitlements. Often pensions are provided by private employers from schemes that the employers control or contract to a third party such as an insurance corporation. It is sometimes possible for a specialised unit to agree to assume responsibility for providing pensions for a number of employers in return for assuming the risk of ensuring adequate funding is available to make the promised pensions. Such an arrangement is called a multi-employer pension scheme.

17.52 Both current employees and former employees, who are the beneficiaries, may make contributions to the scheme and are assumed to receive property income from it. This property income is then treated as contribution supplements payable by them.

17.53 Pension schemes are categorised according to their nature into defined contribution schemes and defined benefit schemes.

Defined contribution schemes

17.54 *Definition:* a defined contribution scheme is a pension scheme where the benefits are defined exclusively in terms of the level of the fund built up from the contributions made over the employee's working life and the increases in value that result from the investment of such funds by the manager of the pension scheme.

17.55 The entire risk of a defined contribution scheme to provide an adequate income in retirement is borne by the employee.

17.56 Providing detail on defined contribution schemes is relatively straightforward since full accounts must be available and no actuarial estimation is involved. Most of those schemes are in the corporations sectors (column A of Table 17.5) but it is possible that in some cases government acts as a scheme manager. The pension entitlements of all defined contribution pension schemes are included in the core national accounts.

Defined benefit schemes

17.57 *Definition:* a defined benefit scheme is a pension scheme where the benefits payable to the employee on retirement are determined by the use of a formula, either alone or in combination with a guaranteed minimum amount payable.

17.58 The risk of a defined benefit scheme to provide an adequate income in retirement is borne by the employer or a unit acting on his behalf.

Notional defined contribution schemes and hybrid schemes

17.59 Notional defined contribution schemes and hybrid schemes are grouped as defined benefit schemes.

17.60 *Definition:* a notional defined contribution scheme is similar to a defined contribution scheme but with a guaranteed minimum amount payable.

17.61 In a notional defined contribution scheme, contributions (both from employee and employer) are credited to, and accumulated on, individual accounts. Those individual accounts are notional, in the sense that the contributions to the schemes are used to pay pension benefits to current pensioners. At retirement, the accumulated balance is converted into an annuity through a formula, based, among other factors, on a measure of life expectancy, and is revised annually to catch up with a measure of the standard of living.

17.62 Hybrid schemes are those schemes which have both a defined benefit and a defined contribution element. A scheme is classified as 'hybrid' either because both defined benefit and defined contribution provisions are present or because it embodies a notional defined contribution scheme and, at the same time, a defined benefit or defined contribution provision. The provision might be combined for a single beneficiary, or differentiated according to groups of beneficiaries by type of contract, pension provided, etc.

17.63 The risk to provide an adequate income in retirement is shared between the employer and the employee under a notional contribution scheme and under a hybrid scheme.

17.64 In certain cases, the employer's risk may be borne by the multi-employer scheme that operates the defined benefit pension scheme on behalf of the employer.

Defined benefit schemes as compared to defined contribution schemes

17.65 The fundamental difference in accounting for a defined benefit pension scheme as compared to a defined contribution pension scheme is that, for the defined benefit pension scheme, the benefit to the employee in the current period is determined in terms of the undertakings made by the employer about the level of pension, whereas for the defined contribution pension scheme the benefit to the employee in the current period is determined by the contributions made to the scheme, and the investment income and holding gains and losses earned on those and previous contributions. Thus while there is in principle complete information available on the benefits for the participant in the defined contribution pension scheme, the benefits for the participants in a defined benefit pension scheme are estimated actuarially.

17.66 There are four sources of change in pension entitlements in a defined benefit pension scheme. The first of these, the current service increase, is the increase in entitlement associated with the wages and salaries earned in the current period. The second source, the past service increase, is the increase in the value of the entitlement due to the fact that for all participants in the scheme, retirement (and death) are one year nearer. The third change in the level of entitlement is a decrease due to the payment of benefits to retirees of the scheme. The fourth source of change comes from other factors, factors that are reflected in the other changes in assets account.

17.67 As with a defined contribution pension scheme, the employer and/or employee may make actual contributions to the scheme in the current period. However, such payments may not be sufficient to meet the increase in the benefits accruing from the current year's employment. An additional contribution from the employer is, therefore, imputed to bring equality between contributions (actual and imputed) and the increase in current service entitlements. Such imputed contributions are usually positive but it is possible for them to be negative if the sum of the contributions received exceeds the increase in current service entitlements.

17.68 At the end of an accounting period, the level of the pension entitlements due to past and present employees can be calculated by estimating the present value of the amounts due to be paid in retirement using actuarial calculations. One element in the increase of this amount year by year is the fact that the present value of the entitlements existing at the beginning of the year, and still due at the end of the year, has increased because the future is one year nearer and so a discount factor less must be used to calculate the present value. It is this unwinding of the discount that accounts for the past service increase in entitlements.

17.69 A further basic difference between a defined benefit pension scheme and a defined contribution pension scheme concerns the payment for the cost of operating the pension scheme. Under a defined contribution pension scheme all of the risk is borne by the beneficiaries. The pension scheme is operated on their behalf and they pay for the cost of it. Since a unit other than the employer may operate the scheme, it is appropriate to treat the operating cost as part of the investment income that is retained by the scheme to meet its costs and generate a profit. In keeping with accounting for insurance, the investment income is treated as being attributed in full to the beneficiaries, part being used to meet the cost and the remainder being reinvested with the scheme.

17.70 For a defined benefit pension scheme, the situation is different. The risk that the fund may be insufficient to meet pension entitlements is borne in part or in whole by the employer, or a unit acting on his behalf, and not by the beneficiaries alone. The scheme may be directly controlled by the employer and be part of the same institutional unit or may be purely notional. Even in this case, there are costs associated with operating the scheme. Although such costs are initially borne by the employer, it is appropriate to regard this as a form of income in kind provided to the employees and for convenience it may be included with the employers' contributions. This assumes all the costs are borne by current employees and none by retirees. It also assumes that the attribution that must be made in the case of notional schemes can be applied in other circumstances.

17.71 For a defined benefit scheme, it is unlikely that self-employed and non-employed persons currently contribute, though it is possible if they were previously in employment giving rise to a defined benefit pension and have the right to continue to participate. Those persons previously in employment, whether currently in receipt of a pension or not, receive property income and pay contribution supplements.

Pension administrator, pension manager, pension fund and multi-employer pension scheme

17.72 Social insurance schemes may be organised by employers or by government, they may be organised by insurance corporations on behalf of employees or separate institutional units may be established to hold and manage the assets to be used to meet pensions and to distribute pensions. The pension fund subsector consists of only those social insurance pension funds that are institutional units separate from the units that create them.

17.73 An employer may contract with another unit to manage the pension scheme and arrange disbursements to the beneficiaries. There are different ways in which this may happen.

17.74 First, the operator of the pension scheme, the pension administrator, simply acts as the employer's agent, undertaking the day-to-day administration of the pension scheme, and the responsibility for any shortfall in the scheme, or the benefit of any excess, remains with the employer.

17.75 Second, the pension manager is responsible also for determining the terms of another employment-related pension scheme and bears the ultimate responsibility for pension entitlements. The pension manager also retains a significant degree of responsibility over the long-term policy of investment in assets, including the selection of investment options and the structure of administrative providers. Although the same unit may frequently carry out both the functions of a pension manager and of a pension administrator, in some cases they are the responsibilities of different units.

17.76 Third, it is not uncommon for a single unit to contract with several employers to manage their pension schemes as a multi-employer pension scheme. The arrangements are such that the multi-employer pension scheme accepts the responsibility for any shortfall in the funds to meet the entitlements in return for the right to keep any excess funds. By pooling the risks over a number of employers the multi-employer scheme expects to balance under- and over-funding so as to emerge with an excess over all the schemes taken as whole in a similar way that an insurance corporation pools risk for many clients. In this case, the multi-employer pension scheme is the pension manager.

17.77 When government takes responsibility for providing benefits to large sections of the community, the social security function fills the role of a multi-employer scheme. Like the insurance corporation, the government then takes on the responsibility for any shortfall in funds to meet the pension liabilities or may be entitled to retain any surplus generated. It is often the case, though, that social security is funded on a pay-as-you-go basis so there is no question of a surplus arising and, if there is a shortfall in resources, government may have powers to change the entitlements not just relating to future employment but also for the past.

17.78 The pension manager's responsibility for any underfunding, or the benefit of any over-funding, of a pension scheme is recorded as a liability/asset relationship with the pension administrator. The change in the liability between the pension manager and the pension administrator is recorded period by period. It is not the pension entitlements of the scheme that are recorded as liabilities of the pension manager, but rather the difference between the pension entitlements and the assets held by the scheme. Where assets held by the scheme are greater than the pension entitlements, a situation described as over-funding, a liability/asset relationship with the pension manager will be recorded where it is certain that any over-funding would become the property of the pension manager in case of liquidation of the scheme.

17.79 Any holding gains and losses on the assets managed by the pension administrator are attributed to the pension manager so that the net worth of the pension fund remains exactly zero at all times.

Recording of stocks and flows by type of pension scheme in social insurance

Transactions for social security pension schemes

17.80 In recognition of the fact that social security is normally financed on a pay-as-you-go basis, pension entitlements accruing under social security are not shown in the core national accounts. If all countries had similar benefits provided under social security and under social insurance schemes, international comparisons would be straightforward. However, this is not the case and national perceptions of what is covered by social security vary considerably.

17.81 Pension entitlements arising from social security schemes are not included in the core national accounts. The diversity of such schemes and employer schemes varies across Member States. Pension entitlements arising from social security schemes are included in the supplementary table for accrued-to-date pension entitlements in social insurance (Table 17.5) to allow comparison of country data.

17.82 The recording of the flows for social security pension schemes refers to contributions made by the employer and by the employees and to social security benefits.

17.83 Any contribution made by the employer is treated as part of compensation of employees. It is recorded as a distributive transaction from the employer to the employee. The employee then pays what he receives from the employer together with any contribution he makes on his own behalf to the social security fund. This amount is recorded as paid by households to government.

17.84 Any contributions made by self-employed or non-employed persons are also included with the contributions made by households to government.

17.85 Social security benefits are recorded as distributive transactions from general government to households.

17.86 Table 17.2 shows the transactions of a social security pension scheme.

Table 17.2 — Accounts for social contributions and pension benefits paid through social security

Uses					Type of account and transaction	Resources				
Employer	Social security fund	House-holds	Other sectors	Total economy		Employer	Social security fund	House-holds	Other sectors	Total economy
					Generation of income account					
139,0				**139,0**	Employers' actual pension contributions (D.1211)					
					Allocation of primary income account					
					Employers' actual pension contributions (D.1211)			139,0		**139,0**
					Secondary distribution of income account					
		226,0		**226,0**	Social security contributions (pensions)		226,0			**226,0**
		139,0		**139,0**	Employers' actual pension contributions (D.6111)		139,0			**139,0**
		87,0		**87,0**	Households' actual pension contributions (D.6131)		87,0			**87,0**
	210,0			**210,0**	Social security pension benefits in cash (D.6211)			210,0		**210,0**

Transactions for other employment-related pension schemes

17.87 For other employment-related schemes, pension entitlements of the participants are usually recorded as they build up. Investment income earned on existing pension entitlements is recorded as being distributed to the beneficiaries and reinvested by them in the pension scheme.

17.88 The recording of transactions for a defined contribution scheme is less complicated than the recording of transactions for a defined benefit scheme.

17.89 For both types of schemes, a pension fund is assumed to exist. For a defined contribution pension scheme, a real fund must exist. For a defined benefit pension scheme a fund may exist in reality or it may be a notional fund. If it exists, it may be part of the same institutional unit as the employer, it may be a separate institutional unit with an autonomous pension scheme, or it may be part of another financial institution, either an insurance corporation or a multi-employer pension scheme.

Transactions for defined contribution pension schemes

17.90 The contribution made by an employer to a defined contribution pension scheme on behalf of an employee is treated as compensation of employees.

17.91 The investment income on accumulated pension entitlements is also recorded as being distributed to households from the pension fund. The investment income includes interest and dividends plus the distributed income of collective investment schemes if the pension fund holds shares in them. It is possible that the pension fund may own property and generate net operating surplus, which is included with the investment income as being distributed to the pension beneficiaries. In this case, the term investment income includes this source of income, if it exists. Holding gains and losses generated by the investment of the cumulated pension entitlements are not included in investment income but are recorded as other changes due to revaluations.

17.92 Part of the income distributed to households is used to meet the costs of operating the pension fund. This cost is recorded as output of the pension fund and as household final consumption expenditure. The remaining part of the distributed income is treated as pension contribution supplements paid back by households to the pension fund.

17.93 Social contributions are recorded as paid by households to the pension fund. The total amount of social contributions is made up of the actual contributions by the employers as part of compensation of employees, actual contributions by employees and possibly by other individuals, such as individuals formerly participating in a scheme, self-employed and non-employed persons as well as retirees, and the contribution supplements specified in paragraph 17.92. For clarity, and to enhance the comparison with defined benefit schemes, the supplements are shown at full value. The total contributions made by households to the pensions fund are net in the same way that insurance premiums are net, that is to say they are the total of all contributions made, less the service charge.

17.94 Contributors other than employees who contribute to a defined contribution pension scheme may include self-employed persons participating in a defined contribution pension scheme or may be non-employed persons who participate in a defined contribution pension scheme by virtue of their profession or former employment status.

17.95 Pension benefits to households from the pension fund are recorded as distributive transactions under other social insurance pension benefits (D.6221).

17.96 There is also a transaction for the service provided by the pension fund (equal to the value of the pension fund's output), recorded as final consumption expenditure by households.

17.97 The increase in pension entitlements caused by an excess of contributions over benefits is recorded as paid by the pension fund to households. Similarly, a decrease in pension entitlements caused by a deficit of contributions compared to benefits is recorded as a payment from households to the pension fund. The change in pension entitlements directly affects the net worth of households, and so the saving of the households sector. Given that much of the increase in the pension entitlement of participants in a defined contribution pension scheme, and thus ultimately the funding for the benefits, comes from holding gains that are not included in the contribution supplements of participants in defined contribution pension schemes, the adjustment for the change in pension entitlements for such individuals will frequently be negative.

17.98 The adjustment for the change in pension entitlements paid by the pension fund to households is recorded as a claim from households to the pension fund.

17.99 Table 17.3 illustrates the entries necessary to record the transactions related to a defined contribution scheme. It is simpler than the corresponding table for a defined benefit scheme, because of the absence of any imputed transactions.

Table 17.3 — Accounts for pension benefits payable under a defined contribution scheme

Uses					Type of account and transactions	Resources				
Employer	Pension fund	House-holds	Other sectors	Total economy		Employer	Pension fund	House-holds	Other sectors	Total economy
					Production account					
					Output (P.1)		1,4			1,4
					Generation of income account					
11,0				11,0	Employers' actual pension contributions (D.1211)					
					Distribution of primary income					
					Employers' actual pension contributions (D.1211)			11,0		11,0

Uses					Type of account and transactions	Resources				
Employer	**Pension fund**	**House-holds**	**Other sectors**	**Total economy**		**Employer**	**Pension fund**	**House-holds**	**Other sectors**	**Total economy**
			3,0	3,0	Property income (D.4)		3,0			3,0
	16,2			16,2	Investment income payable on pension entitlements (D.442)			16,2		16,2
					Secondary distribution of income account					
		37,3		37,3	Household total pension contributions		37,3			37,3
		11,0		11,0	Employers' actual pension contributions (D.6111)		11,0			11,0
		11,5		11,5	Households' actual pension contributions (D.6131)		11,5			11,5
		16,2		16,2	Households' pension contribution supplements (D.6141)		16,2			16,2
		–1,4		–1,4	Social insurance scheme service charges (D.61SC)		–1,4			–1,4
	26,0			26,0	Other social insurance pension benefits (D.6221)			26,0		26,0
					Use of income account					
		1,4		1,4	Final consumption expenditure (P.3)					
	11,3			11,3	Adjustment for the change in pension entitlements (D.8)			11,3		11,3
–11,0	–11,8	25,8	–3,0	0	Saving					
Changes in assets					**Financial account**	**Changes in liabilities**				
					Net borrowing/ lending (B.9)	–11,0	–11,8	25,8	–3,0	0,0
		11,3		11,3	Pension entitlements (F.63)		11,3			11,3
–11,0	–0,5	14,5	–3,0	0,0	Other financial assets					

Other flows related to defined contribution pension schemes

17.100 The other factors affecting the change in the balance sheet entry for the change in pension entitlements are shown in the other changes in assets accounts. In particular, the entitlements of the scheme's beneficiaries show holding gains or losses in the revaluation account corresponding exactly to those on the assets held by the pension fund to meet such obligations.

17.101 The investment of the entitlements of defined contribution pension schemes leads to holding gains or losses. Such gains or losses come about through value changes of the assets held by the pension fund, and an amount exactly equal to the holding gains and losses is attributed as an increase in the pension entitlements of the beneficiaries. This is recorded in the revaluation account.

Transactions for defined benefit pension schemes

17.102 For defined benefit pension schemes, the employer retains responsibility for meeting the pension payments. Alternatives involving the use of a multi-employer scheme or where government assumes responsibility on behalf of the employer follow the definitions given in paragraphs 17.76 and 17.77.

17.103 The total contribution made by an employer to a defined benefit pension scheme on behalf of his employee must be sufficient, so that, together with any actual contribution by the employee and excluding the cost of operating the scheme, it matches the current service increase in the employee's pension entitlements. The contribution by the employer is divided into an actual and an imputed part, the latter being calculated so as to be an exact match between all contributions to the fund adding to the entitlements of the employee and the current service cost of these entitlements.

17.104 The contribution by the employer is calculated in relation to the pension entitlement earned in the period regardless of any investment income earned by the scheme in the same period or any over-funding of the scheme. The current period entitlement is part of compensation of employees, and not including the full value of the employer's contribution will result in an understatement of compensation of employees, and an overstatement of the employer's operating surplus. It is important that contributions continue to be recorded even in the event of a contributions holiday, when the employer does not make an actual contribution, the benefit to the employer being regarded as a change in liabilities between the pension fund and the employer. This leaves the net worth of both the same as when contributions are not recorded under a contributions holiday, without reducing compensation of employees artificially.

17.105 In defined benefit schemes, a qualifying period before an employee becomes eligible to receive a pension in retirement is possible. Despite this qualifying period, both contributions and entitlements are to be recorded from the start of employment, adjusted by a factor reflecting the probability that the employee will in fact satisfy the qualifying period.

17.106 The sum of employers' actual and imputed pension contributions is treated as compensation of employees. It is recorded as a use of the employer in the generation of income account, and a resource of the employee in the allocation of primary income account.

17.107 The increase in the present value of the entitlements of continuing employees and those who no longer contribute but remain eligible for pensions in future represents the investment income distributed to the employees. No deduction is made for any amount that may be funded from holding gains or that is not actually matched by existing funds. The investment income distributed to employees matches the amount that is unequivocally due to the employee under the prevailing agreements; the means by which the employer may ultimately match this obligation is not relevant for the recording of this as investment income any more than the means by which interest or dividends are actually financed affect their recording as investment income. The investment income is recorded as a use for the pension fund and a resource for households. It is immediately reinvested by the households in the fund and included in pension contribution supplements.

17.108 In the secondary distribution of income account, social contributions are shown as a use of households and a resource for the pension fund. The total amount of the social contributions payable is made up of the actual and imputed contributions of the employers as part of compensation of employees, excluding the amount of the costs of running the pension scheme, plus actual contributions by employees plus the contribution supplements specified in paragraph 17.107. As explained in paragraphs 17.54 to 17.56 with regard to defined contribution schemes, the accounts show the full value of the contributions and contribution supplements with an offsetting item representing the service charge payable. The amount actually paid is a net contributions figure.

17.109 The pension benefits to households from the pension scheme are recorded in the secondary distribution of income account. When the benefits are taken in terms of an annuity, the annuity payments are shown here, not the lump sums payable at the time of retirement.

17.110 In the use of income account, there is an entry for the payment of the service provided by the pension fund, equal to the value of the pension fund's output plus the output of the enterprises operating annuities bought with pension entitlements. It is shown as a use for households and a resource for the pension fund.

17.111 Also in the use of income account, there is an entry showing the increase in pension entitlements caused by the granting of further pension entitlements by the employer, on the one hand, less the decrease from the benefits receivable, on the other. This amount is shown as a resource for households and a use for the pension fund. The rationale for this is that since this change in pension entitlements directly affects the net worth of households, it should be included in the saving of the households sector.

17.112 The amount in the use of income account as paid by the pension fund to households is shown in the financial account as a change in assets of households vis-à-vis the pension fund.

17.113 Other organisations, such as a trade union, may operate a defined benefit pension scheme, for their members, that is in all respects parallel to an employer's defined benefit pension scheme. Exactly the same recording is followed except that references to the employer should be understood to refer to the pension manager and references to the employee should be understood to refer to the participant in the scheme.

17.114 To illustrate the recording of transactions connected with a defined benefit pension scheme, Table 17.4 shows a numerical example. Figures that are imputed are shown in bold; those that result from re-routing are shown in italics.

Table 17.4 — Accounts for pension benefits payable under a defined benefit scheme

Uses					Type of account and transactions	Resources				
Employer	Pension fund	Households	Other sectors	Total economy		Employer	Pension fund	Households	Other sectors	Total economy
					Production account					
					Output (P.1)		**0,6**			**0,6**
					Generation of income account					
10,0				10,0	Employers' actual pension contributions (D.1211)					
4,1				**4,1**	Employers' imputed pension contributions (D.1221)					
					Allocation of primary income account					
					Employers' actual pension contributions (D.1211)			10,0		10,0
					Employers' imputed pension contributions (D.1221)			4,1		**4,1**
			2,2	2,2	Property income (D.4)		2,2			2,2
	4,0			**4,0**	Investment income payable on pension entitlements (D.442)			4,0		**4,0**

Uses					Type of account and transactions	Resources				
Employer	Pension fund	House-holds	Other sectors	Total economy		Employer	Pension fund	House-holds	Other sectors	Total economy
					Secondary distribution of income account					
		19,0		19,0	Household total pension contributions	19,0				19,0
		10,0		10,0	Employers' actual pension contributions (D.6111)	10,0				10,0
		4,1		4,1	Employers' imputed pension contributions (D.6121)	4,1				4,1
		1,5		1,5	Households' actual pension contributions (D.6131)	1,5				1,5
		4,0		4,0	Households' pension contribution supplements (D.6141)	4,0				4,0
		–0,6		–0,6	Social insurance scheme service charges (D.61SC)	–0,6				–0,6
	16,0			16,0	Other social insurance pension benefits (D.6221)			16,0		16,0
					Use of income account					
		0,6		0,6	Final consumption expenditure (P.3)					
	3			3	Adjustment for the change in pension entitlements (D.8)			3		3
–14,1	–1,2	17,5	–2,2	0	Saving					
Changes in assets					**Financial account**	**Changes in liabilities**				
					Net borrowing/ lending (B.9)	–14,1	–1,2	17,5	–2,2	0
		3		3	Pension entitlements (F.63)		3			3
	4,1			4,1	Claims of pension funds on pension managers (F.64)	4,1				4,1
–10,0	–2,3	14,5	–2,2	0	Other financial assets					

17.115 Actuarial calculations show that the increase in pension entitlements coming from current service, that is the net amount of the further pension entitlements 'earned' in the year in question, is 15. Households (the policyholders/employees) contribute 1,5. The employer, therefore, is obliged to provide 13,5. In addition, the cost of operating the scheme is estimated at 0,6. In total, therefore, the employer must provide 14,1. He actually contributes 10 so the remaining 4,1 is an imputed contribution. The output of 0,6 is shown in the production account; the consumption of this service is reported in the 'use of income account'. The contributions by the employer are shown as a use for the employer in the generation of income account and a resource for the households in the allocation of primary income account.

17.116 In the allocation of primary income accounts, property income is shown. The increase in pension entitlement coming from past service, due to the unwinding of the discount factor because retirement is one year nearer, is 4. This is shown as an imputed flow of property income from the pension fund to households. At the same time, the pension fund actually earns 2,2 from investment income of the funds they manage. At this point, therefore, there is a shortfall of 1,8 in the pension fund resources but it is not shown in the current accounts.

17.117 In the secondary distribution of income accounts, the payments from households to the pension fund are shown. This can be viewed in one of two ways. The sum of the contributions paid by households should be equal to the increase in entitlements coming from current service (15) plus that coming from income on past entitlements (4) or 19 in total. The amounts actually paid are 10 received as the employers' actual contributions, 4,1 as the imputed contributions, 1,5 of the households own contributions, contribution supplements of 4 less the service charge of 0,6; again 19 in total.

17.118 In the use of income account, as well as the purchase of the service charge as part of household final consumption expenditure, the change in pension entitlement is shown as a use for the pension fund and a resource for households. In this example, the amount of household contributions of 19 is set against pension benefits of 16. Thus, there is an increase in pension entitlements of 3 owing to households.

17.119 Households have saving of 17,5 of which 3 is the increase in their pension entitlements. This means that they have acquired other financial assets (or reduced liabilities) by 14,5. This figure is the difference between the benefits received (16) and households' actual contributions of 1,5.

17.120 In the financial account of the pension fund, the figure of 4,1, which was the imputed contribution, is shown as the claim of the pension administrator on the employer. There is a claim by households on the pension fund of the change in pension entitlements of 3. In addition, the pension fund either runs down financial assets, or increases liabilities, by 2,3, the figure corresponding to disposable income excluding the imputed contribution element from the employer.

Supplementary table for accrued-to-date pension entitlements in social insurance

Design of the supplementary table

17.121 The supplementary table (Table 17.5) on accrued-to-date pension entitlements in social insurance provides a framework for compiling and presenting comparable balance sheets and transactions and other flow data of all types of pension entitlements from a debtor's (pension manager) and also from a creditor's (household) point of view. The table also covers stock and flow data not fully recorded in the core national accounts for specific pension schemes such as government-unfunded defined benefit schemes with government as the pension manager, and social security pension schemes.

17.122 The supplementary table covers the pension part of social insurance regarding old age pensions only, including those pensions paid before normal retirement age. Social assistance, health and long-term care insurance, separate sick leave and disablement insurance are not covered in this table. Neither are individual insurance policies included. However, in practice, it may not be feasible, or sufficiently important, to completely separate the non-pension social insurance elements. Elements of social assistance within pension schemes generally organised as social insurance may not be separable, and so occur in the supplementary table.

17.123 Entitlements for survivors (e.g. dependent spouses, children, and orphans) as well as disability- and invalidity-type benefits are included in the supplementary table when they are an integral part of the pension scheme.

17.124 All elements of the supplementary table are recorded with no deductions made for taxation, further social contributions or the service charge associated with the pension scheme.

Table 17.5 — Supplementary table on accrued-to-date pension entitlements in social insurance

Rela-tions	Row No	Recording	Core national accounts						Not in the core national accounts			
		Pension manager	Non-general government			General government						
			Defined contri-bution schemes	Defined benefit schemes and other[2] non-defined contri-bution schemes	Total	Defined contri-bution schemes	Defined benefit schemes for general government employees[3]			**Social security pension schemes**	Total pension schemes	Counter-parts: pension entitlements of non-resident households[1]
							Classified in financial corporations	Classified in general government[4]	**Classified in general government**			
		Column number	A	B	C	D	E	F	G	H	I	J
		Opening balance sheet										
	1	Pension entitlements										
		Changes in pension entitlements due to transactions										
Σ 2.1 to 2.4 − 2.5	2	Increase in pension entitlements due to social contributions										
	2.1	Employer actual social contributions										
	2.2	Employer imputed social contributions										
	2.3	Household actual social contributions										
	2.4	Household social contribution supplements[5]										
	2.5	Less: pension scheme service charges										
	3	Other (actuarial) change of pension entitlements in social security pension schemes										
	4	Reduction in pension entitlements due to payment of pension benefits										

Rela-tions	Row No	Recording	Core national accounts						Not in the core national accounts			
		Pension manager	Non-general government			General government						
			Defined contri-bution schemes	Defined benefit schemes and other[2] non-defined contri-bution schemes	Total	Defined contri-bution schemes	Defined benefit schemes for general government employees[3]			**Social security pension schemes**	Total pension schemes	Counter-parts: pension entitlements of non-resident households[1]
							Classified in financial corporations	Classified in general government[4]	**Classified in general government**			
		Column number	A	B	C	D	E	F	G	H	I	J
2 + 3 − 4	5	Changes in pension entitlements due to social contributions and pension benefits										
	6	Transfers of pension entitlements between schemes										
	7	Change in entitlements due to negotiated changes in scheme structure										
		Changes in pension entitlements due to other flows										
	8	Changes in entitlements due to revaluations[6]										
	9	Changes in entitlements due to other changes in volume[6]										
		Closing balance sheet										
1 + Σ 5 to 9	10	Pension entitlements										
		Related indicators										
	11	Output										

[1] *Counterpart data for non-resident households will only be shown separately when pension relationships with the rest of the world are significant.*

[2] *Such other non-defined contribution schemes, often described as hybrid schemes, have both a defined benefit and a defined contribution element.*

[3] *Schemes organised by general government for its current and former employees.*

[4] *These are non-autonomous defined benefit schemes whose pension entitlements are recorded in the core national accounts.*

[5] *These supplements represent the return on members' claims on pension schemes, both through investment income on defined contribution schemes' assets and for defined benefit schemes through the unwinding of the discount rate applied.*

[6] *A more detailed split of these positions must be provided for columns G and H based on the model calculations carried out for these schemes.*

The cells shown as ■ are not applicable; the cells in ■ will contain different data from the core national accounts.

The columns of the table

17.125 The columns of the table refer to the three groupings of pension schemes, as follows:

(1) by type of recording into pension schemes completely recorded in the core national accounts (columns A to F) and those whose entitlements are only recorded in the supplementary table (columns G and H);

(2) by type of pension manager into non-general government (columns A to C) and general government pension schemes (columns D to H); pension schemes including social security classified in general government are shown in columns D, F, G and H; and

(3) by type of pension scheme into defined contribution schemes (columns A and D) and defined benefit schemes (columns B and E to G).

17.126 For the most part, the beneficiaries of pension schemes are resident households. In some countries, the number of non-resident households receiving pension benefits may be significant. In this case, column J is added to show the total for non-resident households.

17.127 The decision to record the pension entitlements of an unfunded employment-related defined benefit pension scheme where government is the pension manager within the standard national accounts or only in the supplementary table depends on the nature of the defined benefit scheme. The guiding principle for inclusion in the national accounts is the closeness of the scheme to the national social security pension scheme.

17.128 There is a wide diversity of schemes in the EU, and including all schemes would lead to inconsistencies in recording. So entitlements of unfunded employment-related defined benefit schemes where government is the pension manager are recorded only in the supplementary table. This affects the calculation method in the core national accounts of the imputed employer social contributions for these schemes.

17.129 Pension schemes are classified further according to the pension manager, as government and non-government pension managers. The definition of a pension manager is provided in paragraph 17.75.

17.130 Some employer pension schemes have a mixed membership, for example including both government employees and employees of public corporations, and many pension schemes have frozen the membership of participants who have moved to other employers. A scheme having a small proportion of non-government employees does not prevent the scheme being described as having a government pension manager.

17.131 General government-funded defined benefit schemes for its own employees are shown in columns E and F. Column E shows schemes managed by a pension fund or an insurance corporation and column F those schemes managed by general government itself. Government schemes for its own employees where the pension entitlements do not appear in the core national accounts are shown in column G. The sum of columns E, F and G therefore shows the total responsibility of government for pension entitlements for its own employees.

17.132 Pension schemes are classified by type of scheme as defined contribution pension schemes (columns A and D) and defined benefit pension schemes (columns B, E, F and G). Column H relates to social security pension schemes.

The rows of the table

17.133 The rows of the table relate to balance sheet positions, transactions and other flows associated with pension entitlements of the schemes included in the supplementary table and they are shown separately in Table 17.6. There is reconciliation between the opening stock of pension entitlements of such schemes at the beginning of a period and the closing stock of pension entitlements at the end of a period, taking account of all transactions and other flows during the period. For schemes recorded in columns G and H, the stocks of pension entitlements are not recorded in the core national accounts, but many of the transactions are recorded in the core national accounts.

Table 17.6 — Rows of the supplementary table on accrued-to-date pension entitlements in social insurance

Row No	
	Opening balance sheet
1	Pension entitlements
	Changes in pension entitlements due to transactions
2	Increase in pension entitlements due to social contributions
2.1	Employer actual social contributions
2.2	Employer imputed social contributions
2.3	Household actual social contributions
2.4	Household social contribution supplements[1]
2.5	Less: pension scheme service charges
3	Other (actuarial) increase of pension entitlements in social security pension schemes
4	Reduction in pension entitlements due to payment of pension benefits
5	Changes in pension entitlements due to social contributions and pension benefits
6	Transfers of pension entitlements between schemes
7	Change in entitlements due to negotiated changes in scheme structure
	Changes in pension entitlements due to other economic flows
8	Changes in entitlements due to revaluations[2]
9	Changes in entitlements due to other changes in volume[2]
	Closing balance sheet
10	Pension entitlements
	Related indicators
11	Output

[1] *Such supplements represent the return on members' claims on pension schemes, both through investment income on defined contribution schemes' assets and for defined benefit schemes through the unwinding of the discount factor applied.*

[2] *A more detailed split of such positions has to be provided for columns G and H based on the model calculations carried out for those schemes (see paragraphs 17.158-17.160).*

Opening and closing balance sheets

17.134 Row 1 shows the opening stock of pension entitlements, which is exactly equivalent to the closing stock of the previous accounting period. Row 10 shows the corresponding closing stock of pension entitlements at the end of the accounting period.

Changes in pension entitlements due to transactions

17.135 Employer and employee actual social contributions are recorded in rows 2.1 and 2.3, as in the core national accounts. In the case of some pension schemes, notably social security pension schemes, it is necessary to distinguish actual social contributions relating to pensions from social contributions relating to other social risks such as unemployment.

17.136 For defined benefit pension schemes, employer imputed social contributions are generally measured as the balancing item — any changes in entitlements over the year not included in other rows of the table are captured in row 2.2. This row covers 'experience effects' where the observed outcome of pension modelling assumptions (wage growth rate, inflation rate and discount rate) differs from the levels assumed. Zeros are shown in this row for defined contribution schemes.

17.137 Row 2.4 shows the property income earned or imputed in the schemes, which is routed via the households sector or the rest of the world sector. It should be noted that for all defined benefit schemes including social security, whether funded or unfunded, this property income is equivalent to the unwinding of the discount rate. In other words, the value is equal to the discount rate times the pension entitlements at the beginning of the accounting period.

17.138 Some of the entries in the rows of columns G and H, specifically the actual contributions made by both employers and employees, appear in the core national accounts, even though the entitlements and change in entitlements do not. Other entries in the columns for G and H shown only in the supplementary table are shaded in the table and explained below.

17.139 The imputed contribution by employers for those government schemes for which entitlements appear in column G but not in the core national accounts requires special consideration. Within the core national accounts the imputed contributions are to be estimated on the basis of actuarial calculations. In cases where the actuarial calculations cannot obtain a sufficient level of reliability and in such cases only, two other approaches are possible to estimate government employers' imputed pension contributions as follows:

(1) on the basis of a reasonable percentage of wages and salaries paid to current employees; or

(2) as equal to the difference between current benefits payable and actual contributions payable (by both employees and government as employer).

Items for household social contribution supplements and the other changes in entitlements are shown on the same basis as for private schemes.

17.140 An item calculated on the same actuarial basis in respect of social security is shown in row 3 as 'other (actuarial) accumulation of pension entitlements in social security funds'. It is, thus, distinguished from employers' imputed social contributions.

17.141 Given that the supplementary table provides a complete breakdown of the changes in pension entitlements over the accounting period, it is necessary to introduce a specific row to deal with the case whereby actual social contributions to the social security pension scheme are not actuarially based, and, therefore, there is an imputed contribution, which is not the responsibility of any employer. Such imputed transactions of social security pension schemes are shown in row 3 as other actuarial increase of pension entitlements in social security pension schemes. The entries in this row can be positive or negative — the negative cases occur in a social security pension scheme where the discount rate is higher than the scheme's internal rate of return. The internal rate of return of a pension scheme is the discount rate that equalises the present value of the actual contributions paid and the discounted value of pension entitlements accrued through those contributions. Negative entries occur for example when contributions have been raised above the actuarial required level in order to finance a short-run cash shortfall.

17.142 Row 3 does not represent cash transfers from tax revenues, and would be recorded in the standard accounts as current transfers between government units if they have no impact on pension entitlements. In some Member States, governments make transfers to pension schemes which do increase pension entitlements (for example where transfers are made for specific social groups which are unable to contribute directly), which would indicate that the amounts should be implicitly included in this row figure calculated by difference.

17.143 Differences in the accounting period encountered between assumed and actual wage growth (that is the wage growth part of the 'experience effects' or 'actuarial effects' when modelling) need to be reflected in transactions (employer's imputed social contributions), along with all other experience effects.

17.144 Row 3 captures any 'experience effects' observed for social security pension schemes where the observed outcome of pension modelling assumptions (wage growth rate, inflation rate and discount rate) in any one year differs from the levels assumed.

17.145 Row 4 shows pension benefits that are paid during the accounting period. Payment of pension benefits has the effect of 'settling' some of the pension entitlements included in the opening stock in row 1.

17.146 Row 5 presents the changes in pension entitlements due to contributions and benefits. It is row 2 plus row 3 less row 4. This balancing item measured from the non-financial accounts is equivalent to that measured from the financial accounts.

17.147 One characteristic of the changing environment of pensions is the increasing possibility of having 'portable pensions', where a person moving jobs can transfer the pension entitlement with the former employer to one with the new employer.

When this happens, the pension entitlement of the household concerned is unaffected but there is a transaction between the two pension schemes as the new one assumes the liability of the former. In addition, there will be a counterpart transaction in some assets to match these liabilities.

17.148 If government assumes the responsibility for pension provision for the employees of a non-government unit through an explicit transaction, any payment by the non-government unit needs to be recorded as pre-paid social contributions (F.89). There is further discussion of this type of arrangement in paragraphs 20.272 to 20.275.

17.149 When one unit takes over the responsibility for pension entitlements from another unit, two transactions are recorded in row 6. First, there is a transfer of pension entitlements from the original pension scheme to the new pension scheme. Second, there may be a transfer in cash or other financial assets to compensate the new pension scheme. It is possible that the value of the transfer of financial assets is not exactly equal to the value of the pension entitlements transferred. In that case a third entry is needed in transactions of capital transfers to correctly reflect the changes in net worth of the two units concerned.

17.150 Employers are increasingly reforming the pension schemes they manage in response to demographic and other factors. Reforms may take the form of a change to the benefit formula, a change in the retirement age, or a change in other scheme provisions.

17.151 Only enacted pension reforms lead to recording in the national accounts, in the estimates of pension entitlements in the year in which enactment takes place and subsequently in observed flows. An announcement by an employer of its intention to undertake a pension reform is not a sufficient basis to introduce the effects of the reform into national accounts data.

17.152 In some cases of reform, the employer chooses to leave the vested rights of existing members untouched and only applies the reformed arrangements for future acquisition of additional entitlements. There would be no immediate impact on current pension benefits. The impact would be seen in future measures of pension benefits, in line with the accrued-to-date approach.

17.153 However, in some cases the employer decides to make reforms which affect the accrued-to-date entitlements for existing members; for example, a general increase in retirement age for all members. Such types of reforms change the stock of pension entitlements during the year in which they are enacted. This effect must be accounted for as a flow. It may be very large since it affects current and future pension entitlements.

17.154 Changes in pension entitlements are recorded as transactions as follows:

(a) if the entitlements of a pension scheme are included in the core national accounts, and the employer agrees to a change in the terms of pension entitlements via negotiation with the affected employee, this change is recorded as a transaction in the core national accounts (under imputed employer social contributions);

(b) if the entitlements of a pension scheme are not recorded in the core national accounts, and the employer agrees a change in the terms of pension entitlements via negotiation with the affected employees, this change is recorded as a transaction in the supplementary table;

(c) in the case of social security, if changes in pension entitlements are agreed by the parliamentary authorities, this is recorded in the supplementary table as if it were negotiated.

17.155 Changes in pension entitlements that are imposed without negotiation are recorded as other changes in the volume of assets.

17.156 Changes in accrued-to-date entitlements arising from past service are recorded as capital transfers.

17.157 Row 7 shows the impact of reforms of pension scheme structures on entitlements relating to past service.

Changes to pension entitlements due to other economic flows

17.158 Rows 8 and 9 account for the other flows as revaluations and other changes in volume associated with pension schemes in social insurance. Table 17.7 illustrates the other flows, divided into revaluations and other changes in volume.

17.159 Revaluations are due to changes of key model assumptions in the actuarial calculations. These assumptions are the discount rate, the wage rate and the inflation rate. Experience effects are not included here unless it is not possible to identify them separately. Other changes in actuarial estimates are more likely to be recorded as other changes in volume of assets. The effects of price changes due to the investment of the entitlements are recorded as revaluations appearing in the revaluation account.

17.160 When the demographic assumptions used in the actuarial calculations are changed, they are recorded as other changes in the volume of assets.

Table 17.7 — Other flows as revaluations and other changes in the volume of assets

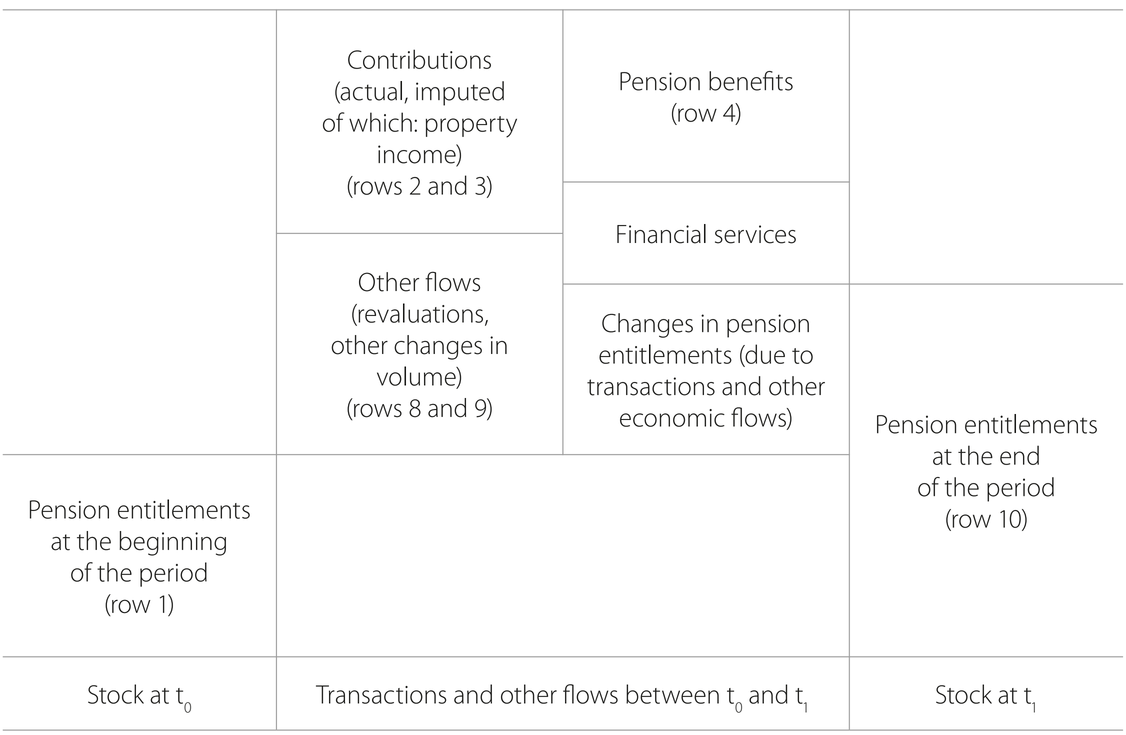
Revaluations
Changes in assumed discount rate
Changes in assumed wage developments
Changes in assumed price developments
Other changes in the volume of assets
Changes in demographic assumptions
Other changes

Related indicators

17.161 Financial services produced by all pension schemes are recorded as being paid by scheme members, and so the costs of pension schemes are not recorded as intermediate consumption of the employer operating the scheme. Accordingly, Chart 17.1 shows financial services separate from social contributions. Presenting financial services in this way means the figures shown as contributions received by employees from their employers are exactly the same as that part of the contributions paid by the employees to the pension scheme. Furthermore, it is not necessary to show which element of social contributions covers the service fee. It is the household contribution supplement that covers the service fee for a defined contribution scheme and it is either the employers' or the household contribution that does so for a defined benefit scheme.

As output is recorded for all employer pension schemes, which the scheme's members consume, row 11 shows the output by type of scheme.

Chart 17.1 — Pension entitlements and their changes



This chart is purely illustrative and no specific meaning should be attributed to the size of the different boxes.

Actuarial assumptions

Accrued-to-date entitlements

17.162 Pension entitlements in national accounts are measured on a gross basis. No assets or accumulated social contributions are taken into account to compile any type of net entitlements. Only pension entitlements due to actual and future pension benefits are covered.

17.163 The accrued-to-date liability concept is appropriate for national accounts purposes. It includes the present value of pension entitlements arising from already accrued pension rights. For example, it covers the pension entitlements accrued by current employees, including deferred pension entitlements, and the remaining pension entitlements of existing pensioners.

17.164 As for all national accounts data, the data are measured *ex post*, as they include only the current values of the entitlements that arise from the accrued pension rights at the balance sheet date. The method is based on observable past events and transactions, such as membership of the pension scheme and paid contributions. However, such *ex post* measures also rely on a number of assumptions in the modelling process. Estimates are made for the probability of current contributors dying or becoming disabled before reaching the pensionable age. The measures also reflect future changes of the payment stream due to any legislation enacted prior to the year for which pension entitlements are being calculated. Finally, the method requires some important assumptions on future developments, notably regarding the discount rate for future pension disbursements.

Discount rate

17.165 The discount rate applied to estimates of future pension benefits in the case of accrued-to-date entitlements is one of the single most important assumptions to be made in the modelling of pension schemes, since its accumulated impact over many decades can be very large. The discount rate from a chosen approach may change over time, which would lead to revaluations in the accounts.

17.166 The discount rate can be seen as equivalent to the expected risk-free rate of return on assets held by a pension scheme. In the case of pension entitlements to be paid in the future, the discount rate can also be seen as the cost of capital in a sense that the future payments have to be financed by government, via the usual sources:

(a) net acquisitions of liabilities, such as loans and debt securities;

(b) net sales of assets; and

(c) government revenue.

A discount rate can be derived from this cost of financing.

17.167 The discount rate should be a risk-free rate. Some criteria for identifying suitable rates are given in the following sentences. The discount rate on high quality government and corporate bonds, e.g. of ‘AAA’-rating provides an appropriate reference. Yields for high quality corporate bonds are only used where the markets are broad. The bonds are to be of a residual maturity of the same order as the pension entitlements. The use of a discount rate based on a long-term maturity, where long-term is taken to be 10 years or longer, is recommended. The average of several years of the discount rate, linked to the length of the economic cycle, can be applied to smooth the time series of the discount rate. The assumption on the discount rate and the future development of wages should be consistent. Member States are required to provide the elements demonstrating the validity of the discount rate used for pension entitlements in the light of the various criteria mentioned above.

17.168 The same discount rate has to be used for all pension schemes where government is the pension manager (including social security pension schemes) at whatever level of government since the desired result should approximate risk-free yields.

Wage growth

17.169 Defined benefit pension schemes often apply a formula to the member’s salary — whether it be the final salary, an average of a period of years, or lifetime earnings — to determine the level of pension. The final pensions paid are affected by the average growth of members' salaries, notably through promotions and career progression.

17.170 It is, therefore, appropriate to consider what assumptions are made for the future development of wages. The assumed long-term development of wages should correspond with the observed discount rate. Both variables are, in the long-term, interdependent.

17.171 The accounting profession uses two actuarial methods to measure the impact of wage increases. The accrued benefit obligation (ABO) records only the benefits actually accrued to date. It represents the amount an employee could walk away with if he left the firm tomorrow, and may be the basis for assessing a person's net worth in the case of a divorce settlement, for example.

17.172 A projected benefit obligation (PBO) is a more prudent measure of what the eventual level of entitlement is likely to be. For an individual, the PBO makes assumptions about how many future promotions the person is likely to receive and calculates his final salary accordingly. Then, if that individual has in fact only worked 20 out of an expected 40 years, it halves the final salary and calculates pension entitlement for the individual as if this were his current salary. Where an individual's ABO increases in steps as he is promoted, the PBO increases steadily over time. For the individual, PBO is always higher than ABO until the moment of retirement when the ABO catches up with the PBO.

17.173 The impact of wage increases needs to be reflected in transactions, because awarding a wage increase is a conscious economic decision taken by the employer. Moreover, in concept the ABO and PBO approaches lead, in the long run, to the same transactions being recorded, even if the timing of those transactions differs depending on the demographics of the scheme.

17.174 Changes to assumptions of future wage changes, which are generally made every few years in response to a general review of pension modelling assumptions or due to a major restructuring of the workforce, are recorded as other flows (revaluations).

17.175 A number of possible variants in the application of the ABO and PBO methods are observed in practice depending on how price and wage effects are treated.

17.176 One important factor is the treatment of indexation arrangements on pensions, where the pension to be paid will increase in line with nominal wage growth after retirement.

17.177 Given the importance of wage effects, it is recommended that the choice of an ABO or PBO approach be based on the underlying benefit formula in the pension scheme. Where this formula includes implicitly or explicitly a factor for wage increases (before or after retirement) then a PBO approach is followed. Where such a factor is not present, an ABO approach is used.

Demographic assumptions

17.178 Future pension payments are subject to demographic effects, in terms of the age/ gender balance of members and their longevity. Demographic tables are well established for the modelling of pension and life insurance schemes.

17.179 In the case of employment-related pension schemes, the membership of the scheme is well defined and, therefore, the data should be available. In the case of social security schemes, recourse is made to general population data if no specific data are available on social security membership.

17.180 In the use of longevity tables, also known as mortality tables, tables which are specified with regard to gender and groups of employees are preferred. The group of members receiving a disability pension should be modelled with different longevity assumptions, if possible.

17.181 Longevity assumptions should include the increase of longevity over time.

17.182 The modelling of pension schemes may involve the use of demographic assumptions other than longevity, for example future fertility rates, labour participation rates or migration rates in the case where the pension benefit or indexation formula is based on a 'dependency ratio' or similar type of approach.

17.183 Where early retirement within a scheme is actuarially neutral, modelling is unaffected. Non-actuarially neutral early retirements have an effect, and they frequently arise given the way in which different interest rates are usually applied at early retirement. Therefore, the appropriate modelling of early retirement behaviour is important, particularly where a reform raises the future pensionable age.

CHAPTER 18

Rest of the world accounts

Introduction

18.01 The accounts of resident institutional sectors show economic activity: production; generation, distribution and redistribution of income; consumption; and accumulation of assets and liabilities. These accounts capture transactions amongst resident units, and transactions of resident with non-resident units that make up the rest of the world.

18.02 The ESA is a closed system in that both sides to every transaction are recorded in the accounts as a use and a resource. For resident units, this enables a coherent articulated set of accounts to be drawn up, and all the economic activities of each institutional unit are included in the sequence of accounts. This is not true for non-resident units. Non-resident units can only be observed through their interaction with resident units of the economy being measured, and so only their transactions with resident units can be recorded. This is done through the creation of a sector called 'the rest of the world' sector, and the compilation of a special set of accounts with limited entries which show, for non-resident units, only the transactions with resident units.

18.03 The sequence of accounts for the rest of the world sector is as follows:

(a) the external account of goods and services (V.I), covering imports and exports of goods and services;

(b) the external account of primary and secondary incomes (V.II), covering compensation of employees, property and investment income, and current transfers such as personal transfers (including workers' remittances) and international aid;

(c) the external accumulation accounts (V.III), consisting of:

(1) the capital account (V.III.1), showing capital transfers and acquisitions less disposals of non-produced non-financial assets;

(2) the financial account (V.III.2), showing transactions in financial assets and liabilities;

(3) other changes in volume of assets account (V.III.3.1), showing uncompensated seizures etc.;

(4) revaluation account (V.III.3.2), showing nominal holding gains and losses;

(d) the external assets and liabilities account (V.IV) presents the opening and closing balance sheets, and the changes in the value of those assets and liabilities between opening and closing balance sheets.

The full sequence is shown in Chapter 8, and the account numbers in brackets above refer to the account numbers in that Chapter.

18.04 As the accounts are drawn up from the point of view of the rest of the world sector, imports to the domestic economy are shown as a resource, and exports from the domestic economy as a use of the external account of goods and services. A similar reversal occurs throughout the rest of the world accounts. If a balance is positive, it signifies a surplus for the rest of the world, and a deficit for the total domestic economy. Similarly, a negative balance shows a deficit for the rest of the world, and a surplus for the domestic economy. A financial asset held by the rest of the world is a liability for the domestic economy, and a liability held by the rest of the world is an asset for the domestic economy.

18.05 The standard framework for statistics on the transactions and positions between an economy and the rest of the world is set out in the *Balance of Payments and International Investment Position Manual 2008 (Sixth edition) (BPM6)*[1]. That man-

[1] International Monetary Fund, *Balance of payments and international investment position manual*, sixth edition (BPM6), 2009, ISBN 978-1-58906-812-4 (available on http://www.imf.org).

ual is harmonised with the System of National Accounts 2008, but sets out the interactions between the domestic economy and the rest of the world in a set of accounts and balance sheets which present the information in a different way. This Chapter sets out the rest of the world sector accounts of the ESA 2010, and how they relate to the international accounts of the BPM6.

Economic territory

18.06 The most commonly used concept of economic territory is the area under the effective economic control of a single government. However, currency or economic unions, regions, or the world as a whole may be used, as they may also be a focus for macroeconomic policy or analysis. The full definition is given in Chapter 2 (paragraphs 2.04-2.06)

18.07 In order to determine whether an entity is a resident in a given economic territory, one must establish:

(1) whether the entity qualifies as an institutional unit; and, if so,

(2) whether the entity also meets the criteria set out in Chapter 2 concerning determination of residency.

Residence

18.08 The residence of each institutional unit is the economic territory with which it has the strongest connection, expressed as its centre of predominant economic interest. The concepts are identical in the ESA, the 2008 SNA and the BPM6. The introduction of the terminology 'centre of predominant economic interest' does not mean that entities with substantial operations in two or more territories no longer need to be split (see paragraph 18.12) or that institutional units without any significant physical presence can be disregarded (see paragraphs 18.10 and 18.15). The concept of residence in general, and for households, enterprises and other entities in particular, is described fully in Chapter 2.

Institutional units

18.09 The concept of 'institutional unit' is the same in the ESA, the 2008 SNA and the BPM6. The general definition is given in Chapter 2, paragraphs 2.12-2.16. Given the focus on the national economy, there are special treatments of units in cross-border situations. In some cases, legal entities are combined into a single institutional unit if they are resident in the same economy, but are not combined if they are resident in different economies. Similarly, a single legal entity may be split when it has substantial operations in two or more economies. As a result of those treatments, the residence of the units concerned becomes more clear-cut and the concept of economic territory is strengthened.

18.10 Corporations' and governments' use of Special Purpose Entities (SPEs) is normally to raise finance. Where the SPE is resident in the same economy as the parent, then the treatment is straightforward. The SPE will normally have none of the attributes that would make it a separate entity from the parent, and assets and liabilities incurred by the SPE will be shown in the accounts of the parent corporation. Where the SPE is non-resident, the residence criteria for the rest of the world sector demand that a separate entity is recognised. In this case, any assets and liabilities incurred by the SPE are shown in the rest of the world sector, and not in a sector of the domestic economy. The treatment of non-resident SPEs belonging to the general government is defined in paragraph 2.14.

18.11 Members of a household must all be resident in the same economy. If a person resides in a different economy from the other members of a household, that person is not regarded as a member of that household, even though they may share income and expenses, or hold assets together.

Branches as a term used in the international accounts of the balance of payments

18.12 A branch is an unincorporated enterprise that belongs to a non-resident unit, known as the parent. It is treated as a resident and a quasi-corporation in the territory where it is situated. The identification of branches as separate institutional units requires indications of substantial operations that can be separated from the rest of the entity. A branch is recognised in the following cases:

(a) either a complete set of accounts, including a balance sheet, exists for the branch; or

(b) it is possible and meaningful, from both an economic and legal viewpoint, to compile those accounts if required. The availability of separate records indicates that an actual unit exists and makes it practical to prepare statistics.

In addition, one or more of the following factors tend to be present:

(a) the branch undertakes or intends to undertake production on a significant scale and that production is based in a territory other than that of its head office, for one year or more:

(1) if the production process involves physical presence, then the operations should be physically located in that territory;

(2) if the production does not involve physical presence, such as some cases of banking, insurance, other financial services, ownership of patents, trademarks or copyrights, merchanting and 'virtual manufacturing,' then the operations should be recognised as being in the territory by virtue of the registration or legal domicile of those operations in that territory;

(b) even if it has tax-exempt status, the branch is recognised as being subject to the income tax system, if any, of the economy in which it is located.

18.13 The identification of branches has implications for the statistical reporting of both the parent and the branch. The operations of the branch are excluded from the institutional unit of its head office and the delineation of parent and branch has to be made consistently in both of the affected economies. A branch may be identified for construction projects or mobile operations such as transport, fishing or consulting. However, if the operations are not substantial enough to identify a branch, they are treated as an export of goods or services from the head office.

18.14 In some cases, preliminary operations related to a future direct investment project prior to incorporation are sufficient evidence of establishing residence with the result that a quasi-corporation is established. For example, licenses and legal expenses for a project are shown as being incurred by a quasi-corporation, and are part of direct investment flows into that unit rather than sales of licenses to non-residents, or exports of services, respectively, to the head office.

Notional resident units

18.15 When land located in a territory is owned by a non-resident entity, a notional unit that is treated as resident is identified for statistical purposes as being the owner of the land. This notional resident unit is a quasi-corporation. This manner of treating a notional unit as resident is also applied to associated buildings, structures and other improvements on that land, leases of land for long periods, and ownership of natural resources other than land. As a result of such treatment, the non-resident is owner of the notional resident unit, rather than owning the land directly, so there is an equity liability to the non-resident, but the land and other natural resources are always assets of the economy in which they are located. The notional resident unit usually supplies services to its owner, for example, accommodation in the case of vacation homes.

18.16 In general, if a non-resident unit has a long-term lease on an immovable asset such as a building, this is associated with it undertaking production in the economy where it is located. If, for any reason, there is no associated production activity, a notional resident unit is also created to cover such a lease. The non-resident unit is treated, therefore, as owning the notional resident unit and not the building, which is the property of the economy where it is located.

Multi-territory enterprises

18.17 Some enterprises operate as a seamless operation over more than one economic territory, typically for cross-border activities such as airlines, shipping lines, hydroelectric schemes on border rivers, pipelines, bridges, tunnels and undersea cables. Separate branches need to be identified unless the entity is run as a single operation with no separate accounts or decision-making for each territory that it operates in. In such cases, because of the central focus on data for each national economy, it is necessary to split the operations between economies. The operations are then pro-rated according to an appropriate enterprise-specific indicator of the proportions of operations in each territory. The pro-rating treatment may also be adopted for enterprises in zones subject to joint administration by two or more governments.

Geographical breakdown

18.18 For the purpose of compiling the accounts of the European Union, the rest of the world sector (S.2) is subdivided into:

(a) Member States and institutions and bodies of the European Union (S.21):

(1) Member States of the European Union (S.211);

(i) Member States of the euro area (S.2111);

(ii) Member States outside the euro area (S.2112);

(2) institutions and bodies of the European Union (S.212):

(i) the European Central Bank (ECB) (S.2121);

(ii) European institutions and bodies, except the ECB (S.2122);

(b) non-member countries and international organisations non-resident in the European Union (S.22).

18.19 For the purpose of compiling the accounts of the euro area, the above subsectors may be grouped as follows:

the Member States of the euro area and the European Central Bank

(S.2I = S.2111 + S.2121);

countries and international organisations that are non-resident in the euro area

(S.2X = S.2112 + S.2122 + S.22).

A description of the European accounts is provided in Chapter 19.

The international accounts of the balance of payments

18.20 The national accounts are different from the international accounts shown in the BPM6. The international accounts show the transactions between a domestic economy and foreign economies from the point of view of the domestic economy. Accordingly, imports are shown as a use (a debit) and exports as a resource (a credit).

A summarised form of the international accounts as presented in the BPM6 is given in Table 18.1.

18.21 A second major difference between the international accounts of the balance of payments, and the rest of the world sector accounts in the ESA, is the use of functional categories in the international accounts rather than instruments in the classifications of financial transactions in the ESA. This issue is further discussed in paragraphs 18.57 and 18.58.

Balancing items in the current accounts of the international accounts

18.22 The structure of the balancing items in the balance of payments is somewhat different from that in the national accounts, in that each account in the international accounts has its own balancing item and another that carries down to the next account. To illustrate this, the primary income account has its own balancing item (balance on primary income) and a cumulative balance (balance on goods, services and primary income). The external balance on primary income corresponds to the balance of primary incomes and is the item feeding into GNI. The current external balance corresponds to saving by the rest of the world relative to the domestic economy. The balancing items in the BPM6 structure of accounts are shown in Table 18.1.

Table 18.1 — The international flow accounts of the balance of payments

Balance of payments			
Current accounts	Credits	Debits	Balance
Goods and services account			
Goods	462	392	70
Services	78	107	–29
Goods and services	540	499	41
Primary income account			
Compensation of employees	6	2	
Interest	13	21	
Distributed income of corporations	36	17	
Reinvested earnings	14	0	
Primary income	69	40	29
Goods, services and primary income	609	539	70
Secondary income account	Credits	Debits	Balance
Taxes on income, wealth	1	0	
Net non-life insurance premiums	2	11	
Non-life insurance claims	12	3	
Current international transfers	1	31	
Miscellaneous current transfers	1	10	
Secondary income	17	55	–38
Current account balance			32
Capital account			
Acquisitions/disposals of non-produced assets	0		
Capital transfers	1	–4	
Capital account balance			–3
Net lending (+)/borrowing (–)			29
Financial account (by functional category)	Change in assets	Change in liabilities	Balance
Direct investment	–4	8	
Portfolio investment	17	7	
Financial derivatives etc.	3	0	
Other investment	42	22	
Reserve assets	8	—	
Total change in assets/liabilities	66	37	
Net lending (+)/net borrowing (–) (financial)			29
Net errors and omissions			0

The accounts for the rest of the world sector and their relationship with the international accounts of the balance of payments

The external account of goods and services

18.23 The goods and services account consists only of imports and exports of goods and services because they are the only transactions in goods and services with a cross-border dimension. Goods and services are recorded when there is a change of economic ownership from a unit in one economy to a unit in another country. Although there is usually a physical movement of goods when there is a change of ownership, this is not necessarily the case. In the case of merchanting, goods may change ownership and not change location until they are resold to a third party.

Tables 18.2 and 18.3 show how primary and secondary income is recorded in the ESA and the BPM6.

Table 18.2 — External account of goods and services (ESA V.1)

Uses			Resources		
P.6	Exports of goods and services	540	P.7	Imports of goods and services	499
P.61	Exports of goods	462	P.71	Imports of goods	392
P.62	Exports of services	78	P.72	Imports of services	107
B.11	External balance of goods and services	–41			

Table 18.3 — Goods and services account of the BPM6

Current accounts	Credits	Debits	Balance
Goods and services account			
Goods	462	392	70
Services	78	107	–29
Goods and services	540	499	41

18.24 Goods that change locations from one economy to another but do not change economic ownership do not appear in imports and exports. Thus, goods sent abroad for processing, or returned after processing, do not appear as imports and exports of goods; only the fee agreed for processing appears as a service.

18.25 The balance of payments gives emphasis to the distinction between goods and services. That distinction reflects policy interests, in that there are separate international treaties covering goods and services. It also reflects data issues, in that data on goods are usually obtained from customs sources, while data on services are usually obtained from payment records or surveys.

18.26 International merchandise trade statistics are the main source of data for goods. International standards are given in *International merchandise trade statistics: Concepts and definitions*[2] Rev. 2 (IMTS) of the UN. The BPM6 identifies some possible sources of difference between the value of goods recorded in merchandise trade statistics and in the balance of payments. It also recommends a standard reconciliation table to assist users in understanding such differences. One major source of difference is that the standards for IMTS use a CIF-type (cost, insurance and freight) valuation for imports, while the balance of payments use a uniform FOB (the value at the customs frontier of the exporting economy, that is, free on board) valuation for both exports and imports. It is, therefore, necessary to exclude freight and insurance costs incurred between the customs frontier of the exporter and the customs frontier of the importer. Given variations between the FOB-type valuation and actual contractual

[2] United Nations, *International merchandise trade statistics: Concepts and definitions*, 1998, ISBN 92-1-161410-4 (available on http://unstats.un.org).

arrangements, some freight and insurance costs need to be rerouted.

The valuation principles are the same in the ESA and the balance of payments. FOB valuation is, therefore, to be followed for recording exports and imports of goods (see paragraph 18.32).

18.27 The change of ownership basis used for the balance of payments means that goods entries will have a time of reporting consistent with the corresponding financial flows. In the BPM6, there are no longer exceptions to the change of ownership principle. In contrast, IMTS follow the timing of customs processing. While this timing is often an acceptable approximation, adjustments may be needed in some cases, such as goods sent on consignment. In the case of goods sent abroad for processing with no change of ownership, the values of goods movements are included in IMTS, but changes in ownership are the primary presentation in the balance of payments, and, therefore, the balance of payments will only show the fees related to 'manufacturing services on physical inputs owned by others'; however, the values of goods movements are recommended as supplementary items to understand the nature of such processing arrangements. Further details of the recording of processing arrangements are given later in this chapter. Other adjustments to IMTS may be needed to bring estimates into line with the change of economic ownership of goods, either generally or because of the particular coverage of each country. Possible examples include merchanting, non-monetary gold, goods entering or leaving the territory illegally, and goods procured in ports by carriers.

18.28 Re-exports are foreign goods (goods produced in other economies and previously imported with a change of economic ownership) that are exported with no substantial transformation from the state in which they were previously imported. Given that re-exported goods are not produced in the economy concerned, they have less connection to the economy than other exports. Economies that are major trans-shipment points and locations of wholesalers often have large values of re-exports. Re-exports increase the figures for both imports and exports and when re-exporting is significant, the proportions of imports and exports to economic aggregates are increased also. It is, therefore, useful to show re-exports separately. Goods that have been imported and are waiting to be re-exported are recorded in inventories of the resident economic owner.

Transit trade is where goods cross a country on their way to their final destination, and, for the country crossed, are generally excluded from foreign trade statistics, balance of payments statistics and the national accounts.

Quasi transit trade are goods imported into a country, cleared through Customs for free circulation within the EU, and then dispatched to a third country in the EU. The entity used for Customs clearance is usually not an institutional unit as defined in Chapter 2, and so does not acquire ownership of the goods. In this case, the import is shown in the national accounts as a direct import to the final destination, as in the case of simple transit trade. The appropriate value is that recorded as the goods enter the final destination country.

18.29 Goods are presented at an aggregate level in the balance of payments. More detailed commodity breakdowns can be obtained from IMTS data.

18.30 In the balance of payments, detail is produced for the following 12 standard components of services:

(a) manufacturing services in relation to physical inputs owned by others;

(b) maintenance and repair services n.i.e.;

(c) transport;

(d) travel;

(e) construction;

(f) insurance and pension services;

(g) financial services;

(h) charges for the use of intellectual property n.i.e.;

(i) telecommunications, computer and information services;

(j) other business services;

(k) personal, cultural and recreational services; and

(l) government goods and services n.i.e.

18.31 Three of the balance of payments' standard components above are transactor-based items, that is, they relate to the acquirer or provider, rather than the product itself. The items fall into the categories of travel, construction and government goods and services n.i.e.

(a) Travel covers all goods or services, acquired by non-residents during visits, whether for own use or to give away. Travel includes goods, local transport, accommodation, meals and other services.

(b) Construction covers the total value of the product delivered by the contractor, including any materials sourced locally and, therefore, not recorded in imports and exports of goods.

(c) Government goods and services n.i.e. cover a range of items that cannot be allocated to more specific headings.

Besides those three transactor-based items, the remaining components are product-based, built from the more detailed classes of CPA Rev. 2. Additional standards for services trade are shown in the *Manual on Statistics of International Trade in Services*[3] (MSITS), which is harmonised with the international accounts.

Valuation

18.32 Valuation principles are the same in the ESA and the international accounts. In both cases, market values are used, with nominal values used for some positions in instruments where market prices are not observable. In the international accounts, the valuation of exports and imports of goods is a special case where a uniform valuation point is used, namely the value at the customs frontier of the exporting economy, that is, the FOB-type valuation (free on board). This treatment brings about consistent valuation between exporter and importer and provides for a consistent basis for measurement in circumstances where the parties may have a wide range of different contractual arrangements, from 'ex-works' at one extreme (where the importer is responsible for arranging all transport and insurance) to 'delivered duty paid' at the other (where the exporter is responsible for arranging all transport, insurance and any import duties).

Goods for processing

18.33 Between the ESA 95 and the ESA 2010, there has been a fundamental change in the treatment of goods sent abroad for processing without change of ownership. In the ESA 95, such goods were shown as exports on being sent abroad, and then recorded as imports on return from abroad, at a higher value as a result of the processing. This was known as the gross recording method, and effectively imputes a change of ownership so that international trade figures represent an estimate of the value of the goods being traded. The 2008 SNA, the BPM6 and the ESA 2010 do not impute a change of ownership, but rather show only one entry — an import of the processing service. This would be an export of the service for the country in which the processing takes place. This recording is more consistent with the institutional records and associated financial transactions. It does, however, cause an inconsistency with the international merchandise trade statistics (IMTS). The IMTS continue to show the gross value of the exports for process and returning imported processed goods.

18.34 In order to avoid such an inconsistency in the national accounts, the value of the exported goods can be recorded alongside that of the imported goods as supplementary items, the values being those recorded in the IMTS. This will enable the net processing service to be derived as the value of the processed goods exported less the value of the unprocessed goods which are imported. It is this service which is recorded in the national accounts. So for the country having the goods processed abroad, the exports will be scored alongside the imported processed goods, as supplementary items in the external goods and services account. This will reconcile the IMTS entries with the net import services figure reflecting the processing costs.

18.35 An example related to the treatment of goods for processing in the supply and use tables will demonstrate the change. Consider the case where a food manufacturing firm harvests and processes vegetables, then outsources the actual canning of the vegetables to a wholly owned subsidiary abroad, and

[3] United Nations, Eurostat, OECD, IMF, WTO et al., ***Manual on Statistics of International Trade in Services***, 2011, (available on: http://unstats.un.org).

then takes them back canned and sells the canned food on.

18.36 In Table 18.4 for the ESA 95, the imports and exports figures should match the entries in the international merchandise trade statistics (IMTS). The exports of goods to the canning subsidiary abroad are 50, and then the canned vegetables are returned as imports of 90.

Table 18.4 — The ESA 95 treatment of goods for processing as international trade

	Purchases	Final demand		Total
Sales	Food manufacturing	Household expenditure	Exports	
Food		90	50	140
Canned food imports	90			90
Value added	50		GDP (E) =	50
Total output	140			

Table 18.5 — The ESA 2010 treatment of goods for processing as international trade

	Purchases	Final demand		Total
Sales	Food manufacturing	Household expenditure	Exports	
Food		90	0	90
Canning services imports	40			40
Value added	50		GDP (E) =	50
Total output	90			

18.37 Table 18.5 shows the ESA 2010 treatment of goods for processing on a net basis: only the trade in services is shown and there will be no match with the movement in goods recorded in the IMTS. The net position, of exports less imports, will be shown in the balance of payments international accounts and the corresponding rest of the world sector accounts. The BPM6 recommends that where it is known that imports and exports in the IMTS reflect a situation where there is no change in ownership, then the two are recorded side by side in the balance of payments figures, so that the services element can be immediately calculated. So, for the food manufacturing industry, the vegetables sent abroad for canning would be shown as an export of 50, and the reimported canned vegetables would be shown as an import of 90. Those figures can be set beside each other in the international accounts statistics as supplementary items, with the exports recorded as negative imports, so enabling a net import of canning services of 40 to be derived.

The recording of this example in the BPM6 is shown in Table 18.6.

Table 18.6 — Recording of processing in the BPM6

Current accounts	Credits	Debits	Balance
Goods and services account			–40
Services (standard components)			
'Manufacturing services on physical inputs owned by others'		40	–40
Supplementary items			
Goods for processing abroad	50	90	–40

Merchanting

Goods under merchanting

18.38 Merchanting is defined as the purchase of goods by a resident (of the compiling economy) from a non-resident combined with the subsequent resale of the same goods to another non-resident without the goods being present in the compiling economy. Merchanting occurs for transactions involving goods where physical possession of the goods by the owner is unnecessary for the process to occur. These and the following clarifications related to merchanting follow the corresponding paragraphs in the BPM6 (paragraphs 10.41-10.48).

18.39 Merchanting arrangements are used for wholesaling and retailing. They may also be used in commodity dealing and for the management and financing of global manufacturing processes. For example, an enterprise may contract the assembly of a good among one or more contractors, such that the goods are acquired by this enterprise and resold without passing through the territory of the owner. If the physical form of the goods is changed during the period the goods are owned, as a result of manufacturing services performed by other entities, then the goods transactions are recorded under general merchandise rather than merchanting. In other cases where the form of the goods does not change, the goods are included under merchanting, with the selling price reflecting minor processing costs as well as wholesale margins. In cases where the merchant is the organiser of a global manufacturing process, the selling price may also cover elements such as providing planning, management, patents and other know-how, marketing, and financing. Particularly for high-technology goods, these non-physical contributions may be large in relation to the value of materials and assembly.

18.40 Goods under merchanting are recorded in the accounts of the owner in the same way as any other goods it owns. However, the goods are detailed specifically in the international accounts statistics of the economy of the merchant because they are of interest in their own right and because they are not covered by the customs system of that economy.

The treatment of merchanting is that:

(a) the acquisition of goods by merchants is shown under goods as a negative export of the economy of the merchant;

(b) the sale of goods is shown under goods sold under merchanting as a positive export of the economy of the merchant;

(c) the difference between sales over purchases of goods for merchanting is shown as the item 'net exports of goods under merchanting'. This item includes merchants' margins, holding gains and losses, and changes in inventories of goods under merchanting. As a result of losses or increases in inventories, net exports of goods under merchanting may be negative in some cases; and

(d) Merchanting entries are valued at transaction prices as agreed by the parties, not FOB.

18.41 Merchanting items appear only as exports in the accounts of the economy of the territory of the merchant. In the counterpart exporting and importing economies, export sales to merchants and import purchases from merchants are included under general merchandise.

18.42 Wholesaling, retailing, commodity dealing, and management of manufacturing may also be carried out under arrangements where the goods are present in the economy of the owner, in which case they are recorded as general merchandise, rather than as merchanting. In cases where the goods do not pass through the economy of the owner, but the physical form of the goods changes, because they are processed in another economy, international transactions are recorded under general merchandise, rather than merchanting (the processing fee is recorded as a manufacturing service paid for by the owner).

18.43 When a merchant resells goods to a resident of the same economy as the merchant, this does not meet the definition of merchanting. Accordingly, the purchase of goods is shown as imports of general merchandise to the economy in that case. If the entity that purchased from a merchant in the same economy subsequently resells the goods to a resident of another economy, whether or not the goods enter the economy of the merchant, the sales of goods are recorded in exports of general merchandise from the economy of the merchant. While such a case is very similar to merchanting, it does not meet the definition given in paragraph 18.38. In addition, it is impractical for the first merchant to record the purchases as merchanting because that merchant may not know whether or not the second merchant will bring the goods into the economy.

Imports and exports of FISIM

18.44 Actual interest on loans paid and received includes an income element and a charge for a service. Credit institutions operate by offering rates of interest to their depositors that are lower than the rates that they charge to their borrowers. The resulting interest margins are used by the financial corporations to defray their expenses and to provide an operating surplus. Interest margins are an alternative to charging customers explicitly for financial services. The ESA prescribes the imputation of a service charge for FISIM. The concept of FISIM and the guidelines for estimating the values of FISIM are given in Chapter 14.

18.45 The financial institutions that implicitly charge FISIM are not necessarily resident, nor need the clients of such institutions be resident. Imports and exports, therefore, of this type of financial service are possible. Guidelines for compiling FISIM imports and exports are in paragraph 14.10.

The external account of primary and secondary income

Tables 18.7 and 18.8 show an example of recording of primary and secondary income in the ESA and the BPM6.

Table 18.7 — External account of primary and secondary incomes (ESA V.II)

Uses			Resources		
			B.11	External balance of goods and services	–41
D.1	Compensation of employees	6	D.1	Compensation of employees	2
D.2	Taxes on production and imports	0	D.2	Taxes on production and imports	0
D.3	Subsidies	0	D.3	Subsidies	0
D.4	Property income	63	D.4	Property income	38
D.5	Current taxes on income, wealth	1	D.5	Current taxes on income, wealth	0
D.6	Social contributions and benefits	0	D.6	Social contributions and benefits	0
D.7	Other current transfers	16	D.7	Other current transfers	55
D.8	Adjustment for the change in pension entitlements	0	D.8	Adjustment for the change in pension entitlements	0
B.12	Current external balance	–32			

Table 18.8 — The primary income account and secondary income account of the BPM6

	ESA code	Credits	Debits	Balance
From goods and services				41
Primary income account				
Compensation of employees	D.1	6	2	
Interest		13	21	
Distributed income of corporations	D.4	36	17	
Reinvested earnings		14	0	
Taxes on production and imports	D.2	0	0	
Subsidies	D.3	0	0	
Primary income		69	40	29
Goods, services and primary income		609	539	70
Secondary income account				
Taxes on income, wealth	D.5	1	0	
Net non-life insurance premiums		2	11	
Non-life insurance claims	D.6, D.7, D.8	12	3	
Current international transfers		1	31	
Miscellaneous current transfers		1	10	
Secondary income		17	55	–38
Current account balance				32

The primary income account

18.46 In the balance of payments, the entries in the primary income account include compensation of employees and property income, exactly as in the allocation of primary income account in the ESA. Payments of taxes on production by residents and receipts of subsidies by residents from the domestic government are recorded in the generation of income account, an account that does not form part of the balance of payments. Any payments of taxes on production payable by a resident to another government as well as any subsidy receivable by a resident from another government are recorded in the primary income account of the balance of payments. The matching entries for the domestic government are shown in the allocation of primary income account and for foreign governments in the rest of the world column of that account and in the primary income account of the balance of payments.

18.47 Rent may arise in cross-border situations, but rarely, since all land is deemed to be owned by residents, including if necessary, by creating a notional resident unit. If such notional resident units are owned by non-residents then any income earned by those units is classified as direct investment income and not as rent. An example where rent is recorded in the international accounts is short-term fishing rights in territorial waters provided to foreign fishing fleets. It is common in the international accounts to use the term investment income meaning property income excluding rent. Investment income reflects income arising from the ownership of financial assets, and the disaggregation of investment income matches that of financial assets and liabilities so that rates of return can be calculated.

Direct investment income

18.48 The role of direct investment is particularly important and reflected in both the flows and positions in the international accounts. In the case of a direct investment, it is assumed that a proportion of the enterprise's retained earnings is distributed to the direct investor as a form of investment income.

The proportion corresponds to the direct investor's holding in the enterprise.

18.49 Retained earnings are equal to the net operating surplus of the enterprise plus all property income earned less all property income payable (before calculating reinvested earnings) plus current transfers receivable less current transfers payable and less the item for the adjustment for the change in pension entitlements. Reinvested earnings accrued from any immediate subsidiaries are included in the property income receivable by the direct investment enterprise.

18.50 Reinvested earnings may be negative, for example where the enterprise makes a loss or where dividends are distributed from holding gains, or in a quarter when an annual dividend is paid. Just as positive reinvested earnings are treated as being an injection of equity into the direct investment enterprise by the direct investor, negative reinvested earnings is treated as a withdrawal of equity.

For a direct investment enterprise that is 100 per cent owned by a non-resident, reinvested earnings are equal to retained earnings and the balance of primary incomes of the enterprise is exactly zero.

The secondary income (current transfers) account of the BPM6

18.51 The secondary income account shows current transfers between residents and non-residents. The range of entries of current transfers corresponds exactly to those in the secondary distribution of income account. Several of those entries are particularly important in the international accounts, especially current international cooperation and remittances sent to their home countries by individuals working abroad.

18.52 Cross-border personal transfers are household-to-household transfers and are of interest because they are an important source of international funding for some countries that provide large numbers of long-term workers abroad. Personal transfers include remittances by long-term workers, that is, those who change their economy of residence.

18.53 Other workers, such as border and seasonal workers, do not change their economy of residence from the home economy. Instead of transfers, the international transactions of such workers include compensation of employees, taxes and travel costs. In the balance of payments, a supplementary presentation of personal remittances brings together personal transfers with those related items. Personal remittances include personal transfers, compensation of employees less taxes and travel, and capital transfers between households.

18.54 Insurance flows, especially flows relating to reinsurance, can be important internationally. The transactions between the direct insurer and the reinsurer are recorded as an entirely separate set of transactions and no consolidation takes place between the transactions of the direct insurer as issuer of policies to its clients, on the one hand, and the holder of a policy with the reinsurer on the other.

The external capital account

18.55 The elements of the capital account subject to international transactions are more restricted than those covered in the domestic sectors. The entries in the capital account only cover acquisitions and disposals of non-produced non-financial assets and capital transfers. There are no transactions recorded as capital formation of produced assets because the ultimate use of exports and imports of goods is not known at the time of recording. Neither are land acquisitions and disposals included.

18.56 Net lending or net borrowing is the balancing item for the sum of the current and capital accounts and for the financial account. It covers all instruments used for providing or acquiring funding, not just lending and borrowing. Conceptually, the BPM6 net lending or net borrowing has the same value as the corresponding national accounts item for the total economy, and the same as the national accounts item for the rest of the world but with the sign reversed. Tables 18.9, 18.10 and 18.11 show the recording of the current and capital account elements and the resulting balance both in the ESA and the BPM6.

Table 18.9 — Change in net worth due to current external balance and capital transfers (ESA V.III.1.1)[1]

Change in assets			Change in liabilities and net worth		
			B.12	Current external balance	–32
			D.9	Capital transfers, receivable	4
			D.9	Capital transfers, payable	–1
B.101	Changes in net worth due to current external balance and capital transfers	–29			

[1] For the rest of the world, this refers to changes in net worth due to current external balance and capital transfers.

Table 18.10 — Acquisition of non-financial assets account (ESA V.III.1.2)

Changes in assets			Changes in liabilities and net worth		
			B.101	Changes in net worth due to current external balance and capital transfers	–29
NP	Acquisitions less disposals of non-produced assets	0			
B.9	Net lending(+)/net borrowing(–)	–29			

Table 18.11 — Capital account of the BPM6

	Credits	Debits	Balance
Current account balance			32
Capital account			
Acquisitions/disposals of non-produced assets	0		
Capital transfers	1	4	
Capital account balance			–3
Net lending (+)/borrowing (–)			29

The external financial account and international investment position (IIP)

18.57 The financial account of the balance of payments and the IIP are of particular importance because they provide an understanding of international financing as well as of international liquidity and vulnerability. Compared to the classification of financial instruments used in the ESA, in balance of payments the classification of the financial instruments is based on functional categories (see paragraph 18.21), with additional data on instruments and institutional sectors. Tables 18.12 and 18.13 show the financial account in the ESA and in the BPM6 respectively.

Table 18.12 — Financial account (ESA V.III.2)

Changes in assets			Changes in liabilities and net worth		
F	Net acquisition of financial assets	37	F	Net incurrence of liabilities	66
F.1	Monetary gold and SDRs	1	F.1	Monetary gold and SDRs	0
F.2	Currency and deposits	11	F.2	Currency and deposits	–2
F.3	Debt securities	9	F.3	Debt securities	20
F.4	Loans	4	F.4	Loans	45
F.5	Equity and investment fund shares	2	F.5	Equity and investment fund shares	14

Changes in assets			Changes in liabilities and net worth		
F.6	Insurance, pension and standardised guarantee schemes	0	F.6	Insurance, pension and standardised guarantee schemes	0
F.7	Financial derivatives and employee stock options	0	F.7	Financial derivatives and employee stock options	3
F.8	Other accounts receivable/payable	10	F.8	Other accounts receivable/payable	–14
			B.9	Net lending (+)/net borrowing (–)	–29

Table 18.13 — Financial account of the BPM6

Net lending (+)/borrowing (–) (current and capital accounts)		29	
Financial account (by functional category)	**Change in assets**	**Change in liabilities**	**Balance**
Direct investment	–4	8	
Portfolio investment	17	7	
Financial derivatives etc.	3	0	
Other investment	42	22	
Reserve assets	8	—	
Total change in assets/liabilities	66	37	
Net lending (+)/net borrowing (–) (financial account)			29
Net errors and omissions			0

18.58 The functional categories of the BPM6 convey information about the motivation and relationship between the parties, which are of particular interest to international economic analysis. Data by functional category are further subdivided by instrument and institutional sector, which makes it possible to link them to the corresponding ESA and monetary and financial statistics items. The institutional sector classification in the BPM6 is the same as in the ESA, although it is usually abbreviated (to five sectors in the standard components). In addition, a supplementary subsector is used for monetary authorities, which is a functional subsector linked to reserve assets. It covers the central bank and any parts of general government or financial corporations other than the central bank that hold reserve assets, so it is relevant for countries where some or all reserves are held outside the central bank.

18.59 The main links between the financial instrument categories of the national accounts and the functional categories of the international accounts are shown in Table 18.14. The functional categories are used both on the asset side and the liabilities side of the financial account of the BPM6. Relatively uncommon links are not shown.

Table 18.14 — Links between the functional categories of the BPM6 and the financial instrument categories of the ESA

	International account functional categories				
ESA instruments	Direct investment	Portfolio investment	Financial derivatives	Other investment	Reserve assets
Monetary gold					X
Special Drawing Rights (SDRs)				X	X
Currency and deposits					
Currency				X	X
Interbank positions				X	X

	International account functional categories				
ESA instruments	Direct investment	Portfolio investment	Financial derivatives	Other investment	Reserve assets
Other transferable deposits	X			X	X
Other deposits	X			X	X
Debt securities	X	X			X
Loans	X			X	X
Equity and investment fund shares					
Equity:					
Listed shares	X	X			X
Unlisted shares	X	X			X
Other equity	X			X	
Investment fund shares/units:					
Money market fund shares/units	X	X			X
Non-MMF investment fund shares/units	X	X		X	X
Insurance, pensions, and standardised guarantee schemes					
Non-life insurance technical reserves	X			X	
Life insurance and annuity entitlements	X			X	
Pension entitlements				X	
Claims of pension funds on pension managers	X			X	
Entitlements to non-pension benefits				X	
Provisions for calls under standardised guarantees	X			X	
Financial derivatives and employee stock options					
Financial derivatives			X		X
Employee stock options			X		
Other accounts receivable/payable					
Trade credits and advances	X			X	
Other accounts receivable/payable, excluding trade credits and advances	X			X	

Balance sheets for the rest of the world sector

18.60 The IIP is that part of the balance sheets covered in the international accounts. The terminology highlights the specific components of the national balance sheet which are included. The IIP covers only financial assets and liabilities. In the case of directly owned real estate in a country by a non-resident unit, a notional resident unit is regarded as the owner of the real estate, and in turn subject to ownership by the non-resident unit in terms of a financial asset (see also paragraph 18.16). In the case of financial claims, the cross-border element arises when one party is a resident and the other party is a non-resident. In addition, while gold bullion is an asset that has no counterpart liability, it is included in the IIP when held as a reserve asset, because of its role in international payments. However, non-financial assets are excluded, as they do not have a counterpart liability or other international aspect.

18.61 The balancing item on the IIP is the net IIP. The net IIP plus non-financial assets in the national balance sheet equal national net worth, because resident-to-resident financial claims net to zero in the national balance sheet. Table 18.15 shows an example of the balance sheet for the rest of the world sector, and Table 18.16 provides an example of IIP.

18.62 The same broad categories are used for investment income and the IIP. As a result, average rates of return can be calculated. Rates of return can be compared over time and for different instruments and maturities. For example, the trends in return on direct investment can be analysed, or the return can be compared with other instruments.

Table 18.15 — Balance sheets for the rest of the world sector (ESA)

		Opening balance	Changes due to transactions	Other changes in volume	Revaluation	Closing balance
Assets						
Non-financial assets						
Financial assets		805	37	0	7	849
AF.1	Monetary gold and SDRs	0	1	0	0	1
AF.2	Currency and deposits	105	11	0	0	116
AF.3	Debt securities	125	9	0	4	138
AF.4	Loans	70	4	0	0	74
AF.5	Equity and investment fund shares	345	2	0	3	350
AF.6	Insurance, pension and standardised guarantee schemes	26	0	0	0	26
AF.7	Financial derivatives and employee stock options	0	0	0	0	0
AF.8	Other accounts receivable/payable	134	10	0	0	144
Liabilities		1 074	66	0	3	1 143
AF.1	Monetary gold and SDRs	770	0	0	0	770
AF.2	Currency and deposits	116	–2	0	0	114
AF.3	Debt securities	77	20	0	2	99
AF.4	Loans	17	45	0	0	62
AF.5	Equity and investment fund shares	3	14	0	1	18
AF.6	Insurance, pension and standardised guarantee schemes	25	0	0	0	25
AF.7	Financial derivatives and employee stock options	7	3	0	0	10
AF.8	Other accounts receivable/payable	59	–14	0	0	45
	Net worth	269				265

Table 18.16 — The integrated IIP statement of the BPM6

International investment position (IIP)	Opening position	Transactions	Other changes in volume	Revaluation	Closing position
Assets					
Direct investment	42	–4	0	1	39
Portfolio investment	40	17	0	2	59
Financial derivatives	0	3	0	0	3
Other investment	152	42	0	0	194
Reserve assets	63	8	0	0	71
Total assets	297	66	0	3	366
Liabilities					
Direct investment	132	8	0	2	142
Portfolio investment	180	7	0	5	192
Financial derivatives	0	0	0	0	0
Other investment	261	22	0	0	283
Total liabilities	573	37	0	7	617
Net international investment position (net IIP)	–276	29	0	–4	–251

CHAPTER 19

European accounts

Introduction

19.01 The process of European integration made it necessary to compile a full set of accounts that reflect the European economy as a whole and enable better analysis and policy making at the European level. European accounts cover the same set of accounts, and are based on the same concepts, as the national accounts of the Member States.

19.02 This chapter describes the distinguishing features of European accounts, that is, the accounts of the European Union and of the euro area. European accounts require particular attention to be given to the definition of resident units, rest of the world accounts and the netting of intra-European economic transactions (flows) and financial balance sheets (stocks).

19.03 The economic territory of the European Union consists of:

(a) the economic territories of the Member States of the European Union; and

(b) the economic territories of European institutions.

19.04 The economic territory of the euro area consists of:

(a) the economic territories of the Member States of the euro area; and

(b) the economic territory of the European Central Bank.

From national to european accounts

19.05 European accounts are conceptually not equal to the sum of the national accounts of the Member States after conversion to a common currency. The accounts of resident European institutions need to be added. The scope of the concept of residence changes when one steps from the national accounts of Member States to European accounts. The ways in which the reinvested earnings of foreign direct investment enterprises or special purpose entities are treated are good examples in this context. In the national accounts of the Member States, a foreign direct investment enterprise may have investors which are residents of another Member State of the European Union/the euro area. The corresponding reinvested earnings are not recorded as such in European accounts. Besides, special purpose entities may need to be reclassified in the same institutional sector as their parent company when the latter is resident of another Member State. Finally, cross-border economic flows and financial stocks between European countries need to be reclassified. These differences are presented in diagrams 19.1 and 19.2 assuming, for the sake of simplicity, a European area composed of only two Member States: A and B. Flows and stocks involving residents and non-residents are schematically displayed with arrows.

Diagram 19.1 — Aggregation of the national accounts of the Member States

When the national accounts of countries A and B are aggregated, the aggregated rest of the world accounts record intra-flows between countries A and B, and with other countries and European institutions.

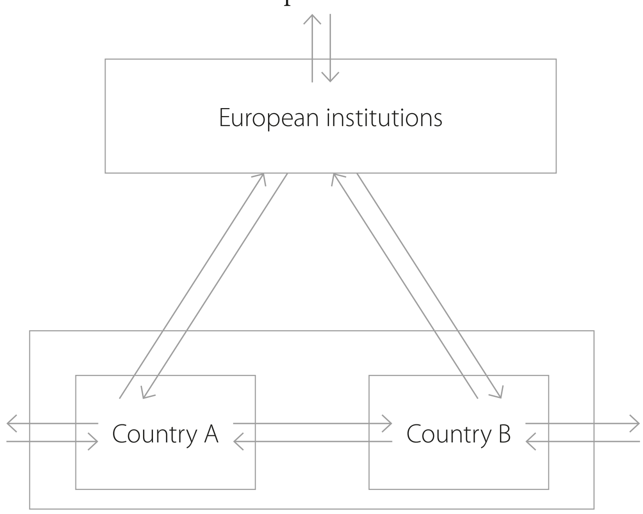
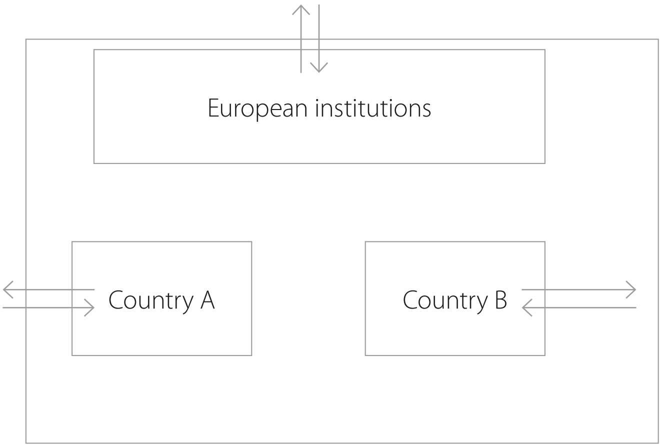


Diagram 19.2 — European accounts

The European Union/euro area is considered as a single entity: the accounts of European institutions/the European Central Bank are included and only transactions of resident units with third countries are recorded in the rest of the world accounts.



Conversion of data in different currencies

19.06 In European accounts, the economic flows and the stocks of assets and liabilities must be expressed in one single monetary standard. For this purpose, data recorded in the different national currencies are converted into euro by either:

(a) using market exchange rates (or an average thereof) prevailing during the time period for which the accounts are compiled;

or

(b) using fixed exchange rates, over the whole time period. The fixed rate can be the one prevailing at the end of the period, in the beginning, or as an average of exchange rates over the whole time period. The exchange rate used affects the (fixed) weight of a given Member State in European aggregates;

or

(c) calculating an index between consecutive periods as the weighted average of the growth indices of the data of each Member State expressed in national currency. Weights are constructed as the exchange-rate converted share of each Member State in the first period of comparison. After a reference period is chosen as a benchmark, the chain-linked index can be applied to this benchmark to generate levels for other periods of observation.

With method (a), the weights of Member States in European aggregates are updated according to the parities of their respective currencies. European aggregates' levels are therefore up-to-date, at any moment in time, but their movements may be affected by exchange rate fluctuations. In the case of ratios, the impact of exchange rate fluctuations on the numerator and denominator may cancel out to a large extent.

With method (b), the weights of Member States are not updated, which preserves the movements of European aggregates from exchange rate fluctuations. However, European aggregates' levels may be influenced by the choice of the (fixed) exchange rates that reflect the parities of Member States' currencies at a given moment in time.

Method (c) preserves the movements of European aggregates from exchange rate fluctuations whereas European aggregates' levels broadly reflect the parities in force for each time period. This is at the expense of additivity and other accounting constraints. If these are required, they must be restored as a last step.

19.07 European accounts can also be calculated by converting data recorded in the different national currencies into purchasing power standards (PPS). Method (a), (b) or (c) set out in paragraph 19.06 can be used for this purpose replacing exchange rates by corresponding purchasing power parities (PPPs).

European institutions

19.08 In the ESA, European institutions comprise the following entities:

(a) European non-financial institutions: the European Parliament, the European Council, the Council, the European Commission, the Court of Justice of the European Union and the European Court of Auditors;

(b) European non-financial bodies, including the entities covered by the general budget of the European Union (e.g. the Social and Economic

Committee, the Committee of the Regions, European agencies etc.) and the European Development Fund; and

(c) European financial institutions and bodies including notably: the European Central Bank, the European Investment Bank and the European Investment Fund.

Note that in category (b) European agencies do not include agricultural market regulatory agencies whose main activity consists in buying and selling agricultural products to stabilize prices. The latter agencies are considered resident in the Member State in which they carry out their activities.

19.09 European non-financial institutions and bodies covered by the general budget of the European Union form one institutional unit which principally provides non-market government services for the benefit of the European Union. It is thus classified in the 'European institutions and bodies' subsector (S.1315)[1] of the 'general government' sector (S.13).

19.10 As long as its budget is not adopted as a part of the general budget of the European Union, the European Development Fund forms a separate institutional unit classified in the 'European institutions and bodies' subsector (S.1315) of the 'general government' sector (S.13).

19.11 The European Central Bank is an institutional unit classified in the 'central bank' subsector (S.121) of the 'financial corporations' sector (S.12).

19.12 The European Investment Bank and the European Investment Fund are separate institutional units classified in the 'other financial intermediaries, except insurance corporations and pension funds' subsector (S.125) of the 'financial corporations' sector (S.12).

19.13 The economic territory of the European institutions includes the territorial enclaves that are located in the Member States of the European Union or in non-EU countries, such as representations, delegations, offices, etc.

[1] This code is specific to European accounts. It is not mentioned in Chapter 23, 'Classifications', as Chapter 23 presents the codes to be used in the national accounts of the Member States whereas European institutions are recorded in the rest of the world sector.

19.14 The main transactions of European institutions are recorded in resources and uses as described in the Annex.

The rest of the world account

19.15 In European accounts, the rest of the world accounts record the economic flows and the financial stocks of assets and liabilities between the resident units of the European Union/the euro area and non-resident units. Hence, European rest of the world accounts exclude transactions taking place within the European Union/the euro area. The flows taking place within the EU/euro area are called 'intra-flows' and the financial positions between residents of the EU/euro area are called 'intra-stocks'.

19.16 Imports and exports of goods include quasi-transit trade, that is:

(a) goods imported from third countries into a Member State of the European Union/euro area by an entity which is not considered to be an institutional unit and then dispatched to another Member State of the European Union/euro area; and

(b) goods arriving from a Member State of the European Union/euro area which are then exported to third countries by an entity which is not considered to be an institutional unit.

Exports of goods shall be valued FOB at the border of the European Union/the euro area.

For goods in quasi-transit to be exported, transportation and distribution costs within the European Union/the euro area shall be considered as output of transportation services if the carrier is resident in the European Union/the euro area and as imports of transportation services if it is not.

19.17 In European accounts, merchanting includes only the purchase of goods by a resident of the European Union/the euro area from a non-resident with the subsequent resale of the same goods to a non-resident without the goods being present in the European Union/the euro area. It is recorded first as a negative export of goods and then as a positive export of goods, with any timing differences between the purchase and sale being recorded as changes in inventories (see paragraphs 18.41 and 18.60).

Where a merchant who is a resident of the European Union/euro area buys goods from a non-resident and then sells them to a resident of another Member State, the purchase is recorded as negative exports in the national accounts of the Member State of the merchant but as imports in European accounts.

19.18 A foreign direct investment enterprise is a resident of the European Union/the euro area where an investor which is not a resident owns 10 per cent or more of the ordinary shares or voting power (for an incorporated enterprise) or the equivalent (for an unincorporated enterprise).

In the national accounts of the Member States, a foreign direct investment enterprise may have investors who are resident in another Member State of the European Union/the euro area. The corresponding reinvested earnings are not recorded as such in European accounts.

Balancing of transactions

19.19 One method to compile the European rest of the world accounts consists of withdrawing intra-European flows, on both the resources and uses sides, from the rest of the world accounts of the Member States. Although these mirror flows should balance in theory, they generally do not do so in practice because of the asymmetrical recording of the same transaction in the national accounts of the counterparties.

19.20 Asymmetries create a mismatch, in European accounts, between the total economy and rest of the world accounts. The compilation of European accounts therefore requires reconciliation of the accounts. This is achieved by reconciliation methods such as minimum least squares or proportional allocation. In the case of goods, intra-Union trade statistics may be used to allocate asymmetries by expenditure category.

19.21 The removal of asymmetries and subsequent balancing of the accounts causes further differences between European aggregates and the sum of the national accounts of the Member States.

Price and volume measures

19.22 European non-financial accounts at the prices of the previous year can be compiled, for transactions in goods and services, using a similar methodology as for European accounts at current prices. First, the accounts of the Member States and European institutions/the European Central Bank, compiled at the prices of the previous year, are aggregated. Second, cross-border transactions among Member States, valued at the prices of the previous year, are eliminated from the rest of the world accounts. Third, the resulting discrepancies between resources and uses are eliminated using the method chosen to balance European transactions at current prices.

19.23 European accounts at the prices of the previous year allow the calculation of volume indices between the current time period and the previous year. After a reference period is chosen as a benchmark, volume indices can be chain linked and then applied to the European accounts at current prices of the benchmark year. This generates European accounts in volume for any period of observation. The series obtained in this way are not additive. If additivity and other accounting constraints are required for measures in volume terms for specific purposes, these must be restored as a last step in order to obtain additive adjusted series.

Balance sheets

19.24 In European accounts, financial balance sheets can be compiled using a similar treatment as for transactions:

(a) the financial balance sheets of the Member States are complemented by stocks of assets held and liabilities assumed by European institutions which are resident of the European Union/euro area;

(b) stocks of financial assets of a resident of the European Union/euro area held by another resident (intra-stocks) are withdrawn from the national rest of the world accounts; and

(c) imbalances created by the mismatch between intra-stocks of financial assets and the corresponding liabilities are allocated to the different sectors through balancing.

19.25 In European accounts, non-financial balance sheets can be compiled as the sum of the non-financial balance sheets of the Member States of the European Union/euro area.

'From whom-to-whom' matrices

19.26 'From whom-to-whom' matrices detail the economic transactions (respectively holdings of financial assets) between institutional sectors. In the national accounts of the Member States, these matrices map in detail the transactions/financial assets between sectors of origin/creditor and destination/debtor, as well as between domestic sectors and the rest of the world.

19.27 In European accounts, 'from whom-to-whom' matrices can be compiled by aggregation of the national matrices and reclassification of intra-European flows and stocks as resident flows and stocks. For this purpose, a distinction is then to be made in these national matrices between transactions, and the holding of financial assets, vis-à-vis the resident units of the European Union/the euro area and the non-residents in the rest of the world account. Moreover, flows and stocks vis-à-vis the residents units of the European Union/the euro area need to be further distinguished by counterpart sectors.

Annex 19.1

The accounts of european institutions

Resources

19.28 The main resources of European non-financial institutions and bodies include the following:

(a) customs and agricultural duties;

(b) production charges on producers of sugar, isoglucose and inulin syrup;

(c) the value added tax resource; and

(d) The gross national income (GNI) resource.

19.29 In the accounts of European institutions, these flows are recorded as resources of the 'European institutions and bodies' subsector (S.1315) and as uses of the rest of the world (S.211).

19.30 Customs and agricultural duties are levied at the external frontiers of the European Union under the common customs tariff. They are classified as 'taxes and duties on imports excluding VAT' (D.212) and include collection costs.

19.31 Production charges are levied on the sugar, isoglucose and inulin syrup quotas held by the producers. They are classified as 'taxes on products, except VAT and import taxes' (D.214) and include collection costs.

19.32 A fixed share of the amounts collected under points (a) and (b) of paragraph 19.28 is retained by Member States as collection costs. This share was 25 % in 2009. In the accounts of European institutions, these collection costs are recorded, on the uses side, as 'intermediate consumption' (P.2) of the 'European institutions and bodies' subsector (S.1315). On the resources side, they are recorded as 'imports of services' (P.72) in the rest of the world accounts (S.211).

19.33 The value added tax resource is calculated by applying a fixed percentage rate, known as the VAT rate of call, to the harmonised VAT assessment base of each Member State. The VAT base is capped in relation to gross national income. The capping of the VAT base means that, if the VAT base of a Member State exceeds a given percentage of this Member State's GNI assessment base, then the VAT rate of call is not applied to the VAT base but to the latter percentage of the GNI assessment base. The value added tax resource includes payments for the current year as well as balances from previous years, corresponding to revisions of past VAT bases, when they are due to be paid. The value added tax resource is classified as 'VAT- and GNI-based EU own resources' (D.76).

19.34 The gross national income resource is a residual contribution to the budget of the European institutions which is assessed on the levels of gross national income of each Member State. It is classified as 'VAT- and GNI-based EU own resources' (D.76) and includes reimbursements as well as the balancing payments for previous years. The correction of budgetary imbalances paid by the other Member States to the countries concerned is also recorded under D.76, as resources and uses of the rest of the world (S.211).

19.35 The contributions of Member States to the European Development Fund are classified as 'current international cooperation' (D.74).

19.36 The Member States subscriptions to the paid-in capital of the European Investment Bank, the European Investment Fund and the European Central Bank are recorded in the financial accounts as 'other equity' (F.519). They are recorded as changes in assets of the rest of the world (S.211) and changes in liabilities of the 'other financial intermediaries, except insurance corporations and pension funds' (S.125)/'central bank' (S.121) subsectors.

19.37 Interests payable on loans granted by the European Investment Bank, after deduction of financial intermediation services indirectly measured (FISIM), are classified as 'interest' (D.41). In the accounts of European institutions, they are recorded as uses of the rest of the world (S.2) and resources of the 'other financial intermediaries, except insurance corporations and pension funds' (S.125).

19.38 Interests payable on loans granted by the European Central Bank are classified as 'interest' (D.41). In the accounts of European institutions, they are recorded as uses of the rest of the world (S.2111) and resources of the 'central bank' (S.121) subsector.

Uses

19.39 Payments made by European non-financial institutions and bodies consist of the following:

(a) transactions related to their activities as non-market producers, mainly: 'intermediate consumption' (P.2), 'gross fixed capital formation' (P.51) and 'compensation of employees' (D.1);

(b) distributive transactions related to the transfers from European institutions to Member States. They take mainly the form of 'subsidies on products' (D.31), 'other subsidies on production' (D.39), 'current international cooperation' (D.74), 'other miscellaneous current transfers' (D.759), 'investment grants' (D.92) and 'other capital transfers' (D.99); and

(c) payments of the European Development Fund to third countries which are classified as 'current international cooperation' (D.74).

19.40 The accounts of European institutions record the payments made by European non-financial institutions and bodies as uses of the 'European institutions and bodies' subsector (S.1315) and resources of the rest of the world (S.211 or S.22).

19.41 Payments made by European non-financial institutions and bodies are generally recorded on the basis of the expenditure statements provided by the Member States. Advance and ex-post payments are recorded in the financial accounts of the European institutions as 'other accounts receivable/payable, excluding trade credits and advances' (F.89).

19.42 Payments made by European financial institutions and bodies consist of the following:

(a) transactions related to their activities as market producers of financial services, mainly: 'intermediate consumption' (P.2), 'gross fixed capital formation' (P.51) and 'compensation of employees' (D.1);

(b) interest payments (D.41).

As the subscriptions of Member States to the capital of the European Investment Bank are not considered as foreign direct investment, there is no imputed flow of reinvested earnings (D.43) to be recorded in its accounts.

19.43 The accounts of European institutions record the payments made by European financial institutions and bodies as uses of the 'other financial intermediaries, except insurance corporations and pension funds' (S.125) subsector and resources of the rest of the world (S.211 or S.22).

Consolidation

19.44 In European accounts, flows between Member States and European institutions are normally not consolidated, among resources and uses, within the 'general government' sector (S.13). However, in the case of 'current international cooperation' (D.74), the payments of Member States to the European institutions to finance, e.g. the European Development Fund, are consolidated and recorded, in European accounts, as uses of national 'central government (excluding social security)' (S.1311) and resources of the rest of the world (S.22).

CHAPTER 20

The government accounts

Introduction

20.01 The activities of government are presented separately from those of the rest of the economy because the powers, motivation, and functions of government are different from those of other sectors. This Chapter presents general government sector accounts and a government finance statistics (GFS) presentation that gives an integrated picture of government economic activities: revenue, expenditure, deficit/surplus, financing, other economic flows and balance sheet.

20.02 Governments have powers to raise taxes and other compulsory levies and to pass laws affecting the behaviour of economic units. The principal economic functions of government are as follows:

(a) to provide goods and services to the community, either for collective consumption such as public administration, defence, and law enforcement, or individual consumption such as education, health, recreation and cultural services, and to finance their provision out of taxation or other incomes;

(b) to redistribute income and wealth by means of transfer payments such as taxes and social benefits;

(c) to engage in other types of non-market production.

20.03 The GFS presentation of general government economic activities presents the usual sequence of accounts in a manner that is more suitable for government finance analysts and policymakers. The GFS presentation uses aggregates and balancing items defined in terms of the ESA concepts, definitions, classifications, and accounting rules so that they are measured consistently with other macroeconomic variables, and with the same measures in other countries. Items such as saving and net lending/net borrowing are already available in the sequence of accounts. Other items, such as total revenue, total expenditure, the tax burden and total debt, are not shown explicitly.

20.04 Additional rules on some more difficult issues of classification and measurement for the general government sector are given in the section 'Accounting issues relating to general government'.

Defining the general government sector

20.05 The general government sector (S.13) consists of all government units and all non-market non-profit institutions (NPIs) that are controlled by government units. It also comprises other non-market producers as identified in paragraphs 20.18 to 20.39.

20.06 Government units are legal entities established by political process which have legislative, judicial or executive authority over other institutional units within a given area. Their principal function is to provide goods and services to the community and to households on a non-market basis and to redistribute income and wealth.

20.07 A government unit usually has the authority to raise funds through compulsory transfers from other institutional units. In order to satisfy the basic requirements of an institutional unit, a government unit must have funds of its own either raised by income from other units or received as transfers from other government units, and must have the authority to disburse such funds in the pursuit of its policy objectives. It must also be able to borrow funds on its own account.

Identification of units in the government

Government units

20.08 In all countries, there is a core entity, notably inside the central government that exercises national executive, legislative and judiciary powers. Its revenues and expenditures are directly regulated and controlled by a Ministry of Finance, or its equivalent, by means of a general budget approved by the legislature. Despite its size and diversity, this entity is usually a single institutional unit. Ministerial departments, agencies, boards, commissions, judicial authorities, and legislative bodies are part of this core central government unit. The separate ministries within it are not recognised as separate institutional units as they do not have the authority to own assets, incur liabilities, or engage in transactions in their own right.

20.09 General government subsectors such as state and local governments can include such primary core government units as described in paragraph 20.08, each related to a given level of government and geographic area.

20.10 In addition to this primary unit, there are government entities with separate legal identities and substantial autonomy, including discretion over the volume and composition of their expenditures and a direct source of revenue, such as earmarked taxes. Such entities are often established to carry out specific functions, such as road construction or the non-market production of health, education or research services. These entities are considered to be separate government units where they maintain full sets of accounts, own goods or assets in their own right, engage in non-market activities for which they are held accountable at law, and are able to incur liabilities and enter into contracts. Such entities (together with non-profit institutions controlled by government) are known as ‘extra-budgetary units’ because they have separate budgets, receive substantial transfers from the main budget, and their primary sources of finance are supplemented with own sources of revenue that fall outside the main budget. These extra-budgetary units are classified to the general government sector unless they are predominantly market producers controlled by another government unit.

20.11 The general budget of any government level can include unincorporated enterprises that are market producers and quasi-corporations. If they qualify as institutional units, such enterprises are not considered to be part of general government, but classified to the non-financial or financial corporations sector.

20.12 Social security funds are government units devoted to the operation of social security schemes. Social security schemes are social insurance schemes covering all or a large part of the community as a whole, which are imposed and controlled by government. A social security fund is an institutional unit if it is organised separately from the other activities of government units, holds its assets and liabilities separately, and engages in financial transactions on its own account.

NPIs classified to the general government sector

20.13 Non-profit institutions (NPIs) that are non-market producers and are controlled by government units are units of the general government sector.

20.14 Governments may choose to use some NPIs rather than government agencies to carry out government policies because they are seen as more detached, objective, and less subject to political pressures. For example, research and development and the setting and maintenance of standards in fields such as health, safety, the environment, and education are areas in which NPIs may be more effective than government agencies.

20.15 Control of a NPI is defined as the ability to determine the general policy or programme of the NPI. Public intervention in the form of general regulations applicable to all units working in the same activity is irrelevant when deciding whether the government holds control over an individual unit. To determine whether a NPI is controlled by the government, the following five indicators of control should be considered:

(a) the appointment of officers;

(b) other provisions of the enabling instrument, such as the obligations in the statute of the NPI;

(c) contractual agreements;

(d) degree of financing;

(e) risk exposure.

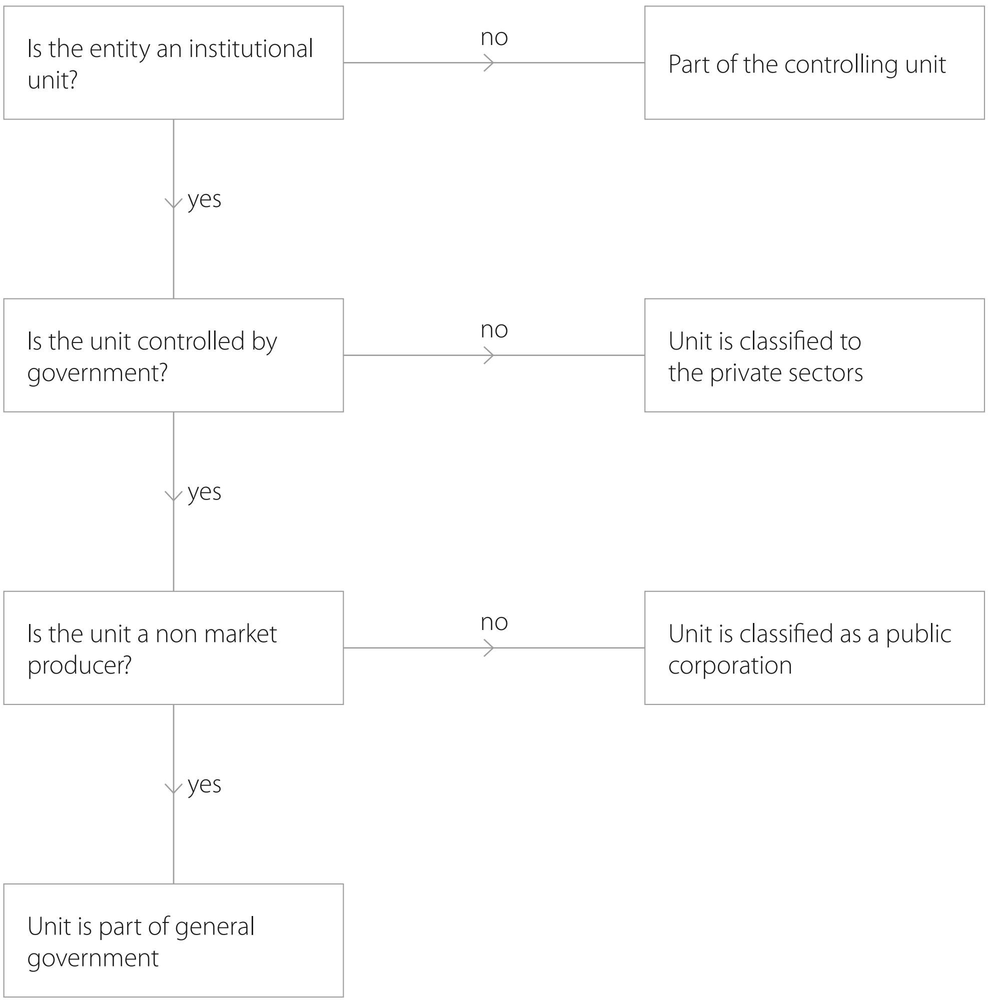
A single indicator can be sufficient to establish control. However, if a NPI that is mainly financed by government remains able to determine its policy or programme to a significant extent along the lines mentioned in the other indicators, then it would not be considered as being controlled by government. In most cases, a number of indicators will collectively indicate control. A decision based on these indicators will be judgmental in nature.

20.16 The non-market characteristic of an NPI is determined in the same way as for other units of general government.

Other units of general government

20.17 It can be difficult to decide on the classification of producers of goods and services that operate under the influence of government units. The alternatives are to classify them as general government or, if they qualify as institutional units, as public corporations. For such cases, the following decision tree is used.

Diagram 20.1 — Decision tree



Public control

20.18 Control over an entity is the ability to determine the general policy or programme of that entity. In order to determine the existence of control by government, the criteria used are those used for corporations liable to be public corporations, as set out in paragraph 2.32.

Market/non-market delineation

Notion of economically significant prices

20.19 Non-market producers provide all or most of their output to others free of charge or at prices that are not economically significant. Economically significant prices are prices which have a substantial influence on the amounts of products producers are willing to supply and on the amounts of products that purchasers wish to acquire. It is the criterion that is used to classify output and producers as market or non-market, thus deciding whether an institutional unit in which government has a controlling interest is to be designated as a non-market producer and so classified in the general government sector, or as a market producer and so classified as a public corporation.

20.20 Whereas the assessment of whether a price is economically significant is carried out at the level of each individual output, the criterion determining the market/non-market character of a unit is applied at the level of the unit.

20.21 When the producers are private corporations, it can be presumed that prices are economically significant. By contrast, when there is public control, a unit's prices may be established or modified for public policy purposes, which may cause difficulties in determining whether the prices are economically significant. Public corporations are often established by government to provide goods and services that the market would not produce in the quantities or at the prices to meet government policy. For such public units enjoying government support, the sales may cover a large part of their costs, but they will respond to market forces differently from private corporations.

20.22 To analyse the difference between a market and a non-market producer, in relation to changes in market conditions, it is useful to specify which units are the consumers of the goods and services in question and whether the producer actually competes on the market or is the only supplier.

Criteria of the purchaser of the output of a public producer

The output is sold primarily to corporations and households.

20.23 Economically significant prices normally result when two major conditions are fulfilled:

(1) the producer has an incentive to adjust supply either with the goal of making a profit in the long run or, at a minimum, covering capital and other production costs, including consumption of fixed capital, by sales; and

(2) consumers are free to choose on the basis of the prices charged.

The output is sold only to government.

20.24 Some services are typically required as ancillary services. They include activities such as transportation, financing and investment, purchasing, sales, marketing, computer services, communications, cleaning, and maintenance. A unit that provides this type of services exclusively to its parent unit or to other units in the same group of units is an ancillary unit. It is not a separate institutional unit and is classified with its parent unit. Ancillary units provide all of their output to their owners for use as intermediate consumption or gross fixed capital formation.

20.25 If a public producer sells only to government and is the only supplier of its services, it is presumed to be a non-market producer unless it competes with a private producer. A typical case is tendering for a contract with government on commercial terms and therefore government payments are only for services delivered.

20.26 If a public producer is one of several suppliers to government, it is considered a market producer if it competes with other producers on the market and its prices satisfy the general criteria to be economically significant, as defined in paragraphs 20.19 to 20.22.

The output is sold to government and others.

20.27 If a public producer is the only supplier of its services, it is presumed to be a market producer if its sales to non-government units are more than half of its total output or its sales to government fulfils the tendering condition of paragraph 20.25.

20.28 If there are several suppliers, a public producer is a market producer if it competes with the other producers through tendering for a contract with government.

The market/non-market test

20.29 The sector classification of core government units, engaged in the provision of goods and services on a non-market basis and/or in the redistribution of income and wealth, is straightforward.

For other producers that operate under the control of government, an assessment of their activity and resources is necessary. In order to decide if they are market units, and charge economically significant prices, the criteria as set out in paragraphs 20.19 to 20.28 are to be checked. In summary the conditions are as follows:

(a) the producer is an institutional unit (a necessary condition; see also the decision tree in paragraph 20.17);

(b) the producer is not a dedicated provider of ancillary services;

(c) the producer is not the only supplier of goods and services to government, or, where that producer is, it has competitors; and

(d) the producer has an incentive to adjust supply to undertake a viable profit-making activity, to be able to operate in market conditions and to meet its financial obligations.

The ability to undertake a market activity will be checked notably through the usual quantitative criterion (the 50 % criterion), using the ratio of sales to production costs (as defined in paragraphs 20.30 and 20.31). To be a market producer, the public unit shall cover at least 50 % of its costs by its sales over a sustained multi-year period.

20.30 For the market/non-market test, sales of goods and services correspond to sales receipts, in other words to the market output (P.11) increased by payments for non-market output (P.131), if any. Own-account production is not considered as part of sales in this context. Sales exclude also all payments received from government unless they are granted to other producers undertaking the same activity.

20.31 Production costs are the sum of intermediate consumption, compensation of employees, consumption of fixed capital and other taxes on production. For the purpose of the market/non-market test, production costs are increased by the net interest charge and decreased by the value of any imputed production, notably own-account production. Subsidies on production are not deducted.

Financial intermediation and the government boundary

20.32 The case of units engaged in financial activities needs special consideration. Financial intermediation is the activity in which units acquire financial assets and at the same time incur liabilities on their own account by engaging in financial transactions.

20.33 A financial intermediary places itself at risk by incurring liabilities on its own account. For instance, if a public financial unit manages assets but does not place itself at risk by incurring liabilities on its own account, it is not a financial intermediary and the unit is classified in the general government sector rather than in the financial corporations sector.

20.34 Applying the quantitative criterion of the market/non-market test to public corporations involved in financial intermediation or in managing assets is generally not relevant, because their earnings arise from both property income and holding gains.

Borderline cases

Public head offices

20.35 Public head offices are entities whose main function is to control and direct a group of subsidiaries under the control of a government unit. Two cases are distinguished.

(a) To the extent that the public head office is an institutional unit and is engaged in the management of market producers, it is classified according to the main activity of the group, in sector S.11 if the main activity is to produce goods and non-financial services, or in sector S.12 if it produces mainly financial services (see also paragraphs 2.23 and 2.59).

(b) If the public head office is not an institutional unit, and so sometimes known as a 'shell', or acts as a government agent for public policy purposes, such as channelling funds amongst subsidiaries, and organising privatisation or defeasance, it is classified to the general government sector.

20.36 The term 'public head office' used here covers units which are also known under the label of 'public holding companies'.

20.37 Subsidiaries forming part of the group, engaged in production and keeping a full set of accounts, are deemed to be institutional units even if they have partially surrendered some of their autonomy of decision to the central body (see paragraph 2.13). The market/non-market test is applied to individual units. It may thus happen that one subsidiary, but not others, is recognised as non-market and classified to the general government sector.

Pension funds

20.38 Employers' pension schemes are arrangements set up to provide retirement benefits to participants, based on a contractual employer-employee relationship. They include funded, unfunded, and partly funded schemes.

20.39 A defined-contribution funded scheme, established by a government unit, is not treated as a social security scheme, where there is no government guarantee on the level of pensions due, and the level of pensions is uncertain because it depends on asset performance. As a consequence, the unit identified as managing the scheme — as well as the fund itself, if it is a separate institutional unit — is considered a financial corporation, classified in the insurance corporations and pension funds subsector.

Quasi-corporations

20.40 Quasi-corporations are unincorporated enterprises that function as if they were corporations. Quasi-corporations are treated as corporations: that is, as separate institutional units from the units to which they belong in recognition of their distinct economic and financial behaviour. Thus, market establishments controlled by government units and recognised as public quasi-corporations are grouped with corporations in the non-financial or financial corporations sectors.

20.41 A government establishment or a group of establishments engaged in the same kind of production under common management is treated as a public quasi-corporation if:

(a) it charges prices for its outputs that are economically significant;

(b) it is deemed to have autonomy of decision; and

(c) a complete set of accounts exists that enables its operating balances, savings, assets and liabilities to be separately identified and measured, or it is possible to construct such a complete set of accounts.

20.42 The amount of income withdrawn from a quasi-corporation during a given accounting period is decided by the owner. Such a withdrawal is equivalent to the payment of a dividend by a corporation to its shareholders. Given the amount of the income withdrawn, the amount of earnings retained within the quasi-corporation is determined. The owner may invest more capital in the enterprise or withdraw capital from it by disposing of some of its assets, and such flows of capital shall also be identifiable in the accounts whenever they occur. Investment and property income flows in the quasi-corporation are recorded in the same way as similar flows in corporations. In particular, investment grants are recorded as capital transfers.

20.43 The producer entities that are not treated as quasi-corporations remain integrated with the government units that own them. While units of government consist largely of non-market producers, market establishments can exist within a government unit. The sales of these market establishments are in addition to incidental sales, which are secondary output sold by non-market establishments at economically significant prices. As a result, a non-zero net operating surplus is possible for a government unit: the net operating surplus generated by market establishments.

Restructuring agencies

20.44 Some public units are involved in the restructuring of corporations. Such corporations may or may not be controlled by government. The restructuring agencies may be long-standing public units or agencies created for this special purpose. Government funds the restructuring in various ways, either directly through capital injections such as capital transfers, loans or acquisition of equity, or indirectly, through granting guarantees. The major criteria determining sector classification of restructuring agencies are whether such entities are financial intermediaries, the market character of the main activity and the degree of risk assumed by the public agency. In many cases, the degree of risk taken by the restructuring agency is low due to the fact that it acts with public financial support and on behalf of the government. Restructuring agencies can handle privatisation or defeasance.

Privatisation agencies

20.45 The first type of restructuring agency manages privatisation of public sector units. There are two cases.

(a) The restructuring unit, whatever its legal status, acts as a direct agent of the government or has a limited lifespan. Its main function is to redistribute national income and wealth, channelling funds from one unit to the other. The restructuring unit is classified in the general government sector.

(b) The restructuring unit is a holding company controlling and managing a group of subsidiaries, and only a minor part of its activity is dedicated to conducting privatisation and channelling funds from one subsidiary to the other on behalf of the government and for public policy purposes. The unit is classified as a corporation, and any transactions made on behalf of the government should be rerouted through the general government.

Defeasances structures

20.46 The second type of restructuring agency deals with impaired assets, and may be set up in a banking or other financial crisis. Such agencies are referred to as defeasance structures or 'bad banks'.

A restructuring agency shall be classified according to the degree of risk it assumes, considering the degree of financial support of the government.

In the most common case, the restructuring agency purchases assets above market prices with the direct or indirect financial support of government. Its activities result in redistribution of national income and wealth. If the defeasance structure does not place itself at risk, it is classified to the general government sector.

Special purpose entities

20.47 Special purpose entities (SPEs), also called special purpose vehicles (SPVs), may be set up for financial convenience by governments or by private entities. The SPE may be involved in fiscal operations, including securitisation of assets, borrowing on behalf of government, etc. Such SPEs are not separate institutional units when resident. These entities are classified according to the principal activity of the owner, and SPEs performing fiscal operations are classified to the general government sector.

20.48 Non-resident SPEs are recognised as separate institutional units. All flows and stock positions between the general government and the non-resident SPE are recorded in the general government and SPE accounts. In addition, when such non-resident SPEs undertake government borrowing or incur government outlays abroad, even when there are no flows recorded between the government and the SPE related to those fiscal activities, transactions are imputed in the accounts of both the government and the non-resident entity to reflect the fiscal activities of the government. If a non-resident SPE engages in a securitisation operation without a sale of asset, the operation is considered to be a borrowing transaction of the government. The economic substance of this transaction is accounted for by imputing general government borrowing from the non-resident SPE for the same value and at the same time the SPE incurs a liability to the foreign creditor.

Joint ventures

20.49 Many public units enter into arrangements with private entities or other public units to undertake a variety of activities jointly. The activities can result in market or non-market output. Joint operations can be structured broadly as one of three types: jointly controlled units, referred to here as joint ventures; jointly controlled operations; and jointly controlled assets.

20.50 A joint venture requires the establishment of a corporation, partnership or other institutional unit in which each party has joint control over the activities of the unit. As an institutional unit, the joint venture may enter into contracts in its own name and raise finance for its own purposes. A joint venture maintains its own accounting records.

20.51 Normally, the percentage of ownership will be sufficient to determine control. If each owner owns an equal percentage of the joint venture, the other indicators of control must be considered.

20.52 Public units can also enter into joint operating arrangements that are not run by separate institutional units. In this case, there are no units requiring classification, but care must be taken to ensure that the ownership of assets is recorded correctly and sharing arrangements of revenues and expense are made in accordance with the provisions of the governing contract. For example, two units may agree to be responsible for different stages of a joint production process or one unit may own an asset or a complex of related assets but both units agree to share revenues and expenses.

Market regulatory agencies

20.53 Public agencies acting in the field of agriculture engage in two types of activity:

(a) either to buy, hold and sell agricultural and other food products on the market; or

(b) to be exclusively or principally a distributor of subsidies or other transfers to producers.

In the first case, given that it acts as a market producer, the institutional unit is classified in the non-financial corporations sector (S.11). In the second case, the institutional unit is classified in the general government sector (S.13).

20.54 Where the market regulatory agency performs both activities described in paragraph 20.53, it is split into two institutional units, according to the principal activity, one being classified in the non-financial corporations sector (S.11), the other in the general government sector (S.13). In the case where it would be difficult to split the agency in this way, a convention is to adapt the usual sector classification test applying a 'principal activity' criterion on the basis of costs. If the costs of the unit are very significantly linked to the market managing activity, the unit is classified in the non-financial corporations sector. An 80 % threshold of costs to sales ratio is recommended. If the costs to sales ratio linked to the regulatory activity are less than this threshold, the unit is classified in the general government sector (S.13).

Supranational authorities

20.55 Some countries are part of an institutional agreement whereby the countries form part of a supranational authority. Normally such an arrangement implies monetary transfers from the member countries to the supranational authority and the reverse. The supranational authority will also engage in non-market production. In the national accounts of the member countries, the supranational authorities are non-resident institutional units that are classified to a specific subsector of the rest of the world.

The subsectors of general government

20.56 Depending on the administrative and legal arrangements, there is generally more than one level of government within a country. In Chapter 2, three levels of government are specified: central, state (or regional) and local, with a subsector for each level. In addition to these levels of government, the existence and size of social security and its role in fiscal policy require that statistics for all social security units be compiled as a fourth separate subsector of general government. Not all countries have all levels; some may have only a central government or a central government and one lower level. In countries that have more than three levels, the various units should all be classified to one of the levels above.

Central government

20.57 The central government (excluding social security) subsector (S.1311) consists of all government units having a national sphere of competence, with the exception of social security units. The political authority of a country's central government extends over the entire territory of the country. The central government can impose taxes on all resident institutional units and on non-resident units engaged in economic activities within the country. Central government typically is responsible for providing collective services for the benefit of the community as a whole, such as national defence, relations with other countries, public order and safety, and for regulating the social and economic system of the country. In addition, it may incur expenditure on the provision of services, such as education or health, primarily for the benefit of individual households, and it may make transfers to other institutional units, including other levels of government.

20.58 The compilation of statistics for central government is important because of the special role it plays in economic policy analysis. It is mainly through central government that fiscal policy impacts on inflationary or deflationary pressures within the economy. It is generally at the central government level that a decision-making body formulates and carries out policies directed toward nationwide economic objectives.

20.59 The central government subsector is a large and complex subsector in most countries. It is generally composed of a central group of departments or ministries that make up a single institutional unit plus miscellaneous bodies operating under the control of the central government with a separate legal identity and enough autonomy to form additional central government units.

20.60 The main central group or primary central government is sometimes called budgetary central government emphasising the fact that an essential of its key reporting statement is the 'budget'. This suggests that the budget provides an implicit delimitation of this underlying institutional unit of central government. It is sometimes called the 'State', which should not be confused with the notion of state government such as provinces, *Länder*, cantons, republics, prefectures, or administrative regions in a federal system of government. When drawing up the complete sequence of accounts for budgetary central government, it is often appropriate to include the activities of extra-budgetary funds, when they are not institutional units, and generally all treasury operations not reported in the budget.

20.61 The other component of central government consists of other central government bodies, also called extra-budgetary units, which comprise extra-budgetary agencies or entities that qualify as institutional units, non-market public enterprises with legal status and non-market public controlled NPI.

20.62 Central government can be partitioned into two components: budgetary central government and other central government bodies. This partition is a matter of judgment and can be influenced by practical considerations. An important criterion is the institutional coverage of the 'budget'. However, the exact composition should be precisely known and agreed between compilers at the national level, to reinforce the consistency of source data. The ability to draw a complete sequence of accounts for these two 'subsectors' of central government is important in assessing the quality of the data.

State government

20.63 The state government (excluding social security) subsector (S.1312) consists of all government units in a federal system of government having a state or regional sphere of competence, with the possible exception of social security units. A state is the largest geographical area into which the country as a whole is divided for political or administrative purposes. Such areas are known by terms such as provinces, *Länder*, cantons, republics, or administrative regions. They all enjoy the sufficient level of power required in a federal system of government. The legislative, judicial, and executive authority of a state government extends over the entire area of an individual state, which usually includes numerous localities, but does not extend over other states. In many countries, state governments do not exist. In federal countries, considerable powers and responsibilities may be assigned to state governments, and compiling a state government subsector is appropriate in such cases.

20.64 A state government usually has the fiscal authority to levy taxes on institutional units that are resident in, or engage in economic activities in, its area of competence. To be recognised as a government unit, the entity must be able to own assets, raise funds, and incur liabilities on its own account, and it must also be entitled to spend or allocate at least some of the taxes or other income that it receives according to its own policies. The entity may, however, receive transfers from the central government that are tied to certain specified purposes. A state government is able to appoint officers independently of external administrative control. If a government entity operating in a state is entirely dependent on funds from central government, and if central government also dictates the ways in which those funds are to be spent, then the entity is an agency of central government.

Local government

20.65 The local government (excluding social security) subsector (S.1313) consists of government units having a local sphere of competence (with the possible exception of social security units). Local governments typically provide a wide range of services to local residents, some of which may be financed out of grants from higher levels of government. Statistics for local government cover a wide variety of governmental units, such as counties, municipalities, cities, towns, townships, boroughs, school districts, and water or sanitation districts. Often local government units with different functional responsibilities have authority over the same geographic areas. For example, separate government units representing a town, a county, and a school district have authority over the same area. In addition, two or more contiguous local governments may organise a government unit with regional authority that is accountable to local governments. Such units are classified to the local government subsector.

20.66 The legislative, judicial, and executive authority of local government units is restricted to the smallest geographic areas distinguished for administrative and political purposes. The scope of a local government's authority is generally much less than that of the central or a state government, and such governments may or may not be entitled to levy taxes on institutional units or economic activities taking place in their areas. They are often dependent on grants from higher levels of government, and act as agents of central or state governments to some extent. To be treated as institutional units, however, they must be entitled to own assets, raise funds, and incur liabilities by borrowing on their own account. They must also have discretion over how such funds are spent, and they should be able to appoint their own officers independently of external administrative control.

Social security funds

20.67 The social security funds subsector (S.1314) consists of all social security units, regardless of the level of government that operates or manages the schemes. If a social security scheme does not meet the requirements to be an institutional unit, it would be classified with its parent unit in one of the other subsectors of the general government sector. If public hospitals provide a non-market service to the community as a whole and if they are controlled by social security schemes, they are classified to the social security funds subsector.

The government finance presentation of statistics

Framework

20.68 Experience has shown that for government, an alternative presentation to the ESA sequence of accounts in the central framework is better suited to certain analytical requirements. This alternative is known as the government finance statistics ('GFS') presentation. It gives a different but still integrated picture of government accounts with the following measures of government economic activity: revenue, expenditure, deficit/surplus, financing, other economic flows and balance sheet levels.

20.69 The ESA based GFS presentation consists of transactions recorded in the various ESA current accounts, capital account and financial account, rearranged for non-financial transactions into a single account presentation more appropriate to fiscal analysis.

20.70 In the GFS system, revenue is defined as the aggregate of all transactions recorded under positive resources in the ESA central framework, and subsidies receivable in the current accounts as well as capital transfers receivable recorded in the capital account. Expenditure is an aggregate of all transactions recorded under positive uses and under subsidies payable in the current accounts as well as capital expenditure — gross capital formation plus capital transfers payable — recorded in the capital account. These measures of revenue and expenditure are specific to the GFS presentation, but the underlying transactions are those of the ESA.

20.71 The difference between revenue and expenditure, equivalent to the surplus/deficit, is the net lending/net borrowing (B.9). The financing of the surplus/deficit is shown in the financial account, where net acquisitions of financial assets and net incurrence in liabilities are recorded. Expenditure and revenue entries have a counterpart entry in the financial account. Financial transactions may also lead to two entries in the financial account. This reflects the double entry principle where every transaction has a matching transaction in the financial account. In principle, the net lending/net borrowing can be derived also from transactions in financial assets and liabilities.

20.72 The GFS presentation is shown below:

Government finance statistics presentation	
	Revenue
	Taxes
	Social contributions
	Sales of goods and services
	Other current revenue
	Capital transfer revenue
less	Expenditure
	Intermediate consumption
	Compensation of employees
	Interest
	Subsidies
	Social benefits
	Other current expenditure
	Capital transfer expenditure
	Investment expenditure
equals	Net lending/net borrowing
equals	Net financial transactions

20.73 Additional accounts in the GFS system are for other economic flows, and balance sheets, coherent with the ESA sequence of accounts. Such accounts allow a complete reconciliation of the change in balance sheet and the flows taking place during the accounting period. For each asset or liability, the following identity holds:

	opening balance sheet
plus	transactions
plus	revaluations
plus	other changes in volume
equals	closing balance sheet

20.74 The balance sheet shows total asset levels — non-financial and financial — as well as liabilities stocks outstanding, which enables the following to be derived: net worth as total assets minus total liabilities, and financial net worth as total financial assets minus total liabilities.

20.75 Government finance statistics presents the financial performance of general government and its subsectors, or any grouping of government units, and also individual institutional units such as the budgetary central government.

Revenue

20.76 A revenue transaction is one that increases net worth, and has a positive impact on net lending (+)/net borrowing (–). Government revenue is usually dominated by compulsory levies imposed by government in the form of taxes and social contributions. For some levels of government, transfers from other government units and grants from international organisations are a major source of revenue. Other general categories of revenue include property income, sales of goods and services, and miscellaneous transfers other than grants. The total government revenue of an accounting period is calculated by summing transactions that are receivable, as follows:

Total revenue	=		total taxes	D.2 + D.5 + D.91
		+	total social contributions	D.61
		+	total sales of goods and services	P.11 + P.12 + P.131
		+	other current revenue	D.39 + D.4 + D.7
		+	other capital revenue	D.92 + D.99

Taxes and social contributions

20.77 Total taxes comprise taxes on production and imports (D.2), current taxes on income and wealth, etc. (D.5) and capital taxes (D.91). Total social contributions consist of actual social contributions (D.611) and imputed social contributions (D.612).

20.78 Estimating taxes and social contributions can be difficult. The problems involved and the recommended solutions are described in the section 'Accounting issues relating to general government' of this Chapter. While taxes are recorded in several of the accounts of the ESA central framework, in the government finance statistics presentation all taxes are presented as one category of revenue, with sub-classifications according to the base on which the tax is levied. Capital taxes are shown as revenue taxes in the government finance statistics presentation.

20.79 Tax and social contributions revenue data[1] are used to compile total tax or fiscal burden ratios, such as the ratio of total tax to the level of GDP, used in international comparisons. In this context, compulsory social contributions are presented simultaneously with tax statistics and are included in the measures of fiscal burden or compulsory levies.

Sales

20.80 Total sales of goods and services consist of market output (P.11) and payments for non-market output (P.131). They also include — except when they are used for the market/non-market test (see paragraph 20.30) — output for own final use (P.12). Most of the output produced by general government consists of goods and services that are not sold, or that are sold at prices that are not economically significant. The distribution of a non-market output does not accord with the concept of revenue. For goods and services, only actual sales and some specific imputed sales are included in revenue.

20.81 Market output (P.11) of government comprises:

(a) the market output of market establishments included in government, such as a weapons factory that is part of the ministry of defence, or canteens set up by government units for their employees, that charge economically significant prices;

(b) secondary market products sold by non-market establishments, sometimes referred to as 'incidental sales', such as those arising from research and development contracts between

[1] The ESA based total tax and social contributions revenue measure is consistent with that of the OECD Revenue Statistics, except for the recording of payable tax credits and of imputed social contributions. The ESA recording of taxes and social contributions is also harmonised with the IMF government finance statistics presentation, with some differences in breakdowns.

public universities and corporations, or publications sold by government units at economically significant prices.

20.82 The above-quoted 'incidental sales' are distinct from the token museum entrance fees paid by visitors, which are usually partial payments for non-market output (P.131). Other significant partial payments include payments to hospitals or schools, when these are non-market.

20.83 The value of own-account capital formation is considered revenue in the ESA based government finance statistics, and included under sales. Sales include also the value of goods and services produced and provided as compensation of employees in kind or as other payment in kind.

20.84 Sales revenue in the ESA based government finance statistics takes an output perspective: they do not differ from output, whereas actual sales to customers differ by changes in inventories. However such changes in inventories are likely to be small for government units and other non-market producers, mostly engaged in the production of services rather than in the production of goods. Sales are valued at basic prices.

Box 20.1 — From the ESA central framework to GFS transactions and aggregates

	ESA resources	ESA GFS revenue
P.1	Output, of which	
	Market output (P.11)	Sales of goods and services
	Output for own final use (P.12)	Sales of goods and services
	Non-market output (P.13), of which:	
	— Payments for non-market output (P.131)	Sales of goods and services
	— Non-market output, other (P.132)	Not accounted for in Total revenue
D.2	Taxes on production and imports (receivable)	Total taxes
D.3	Subsidies (receivable)	Other current revenue
D.4	Property income	Other current revenue
D.5	Current taxes on income and wealth	Total taxes
D.61	Social contributions	Total social contributions
D.7	Other current transfers	Other current revenue
D.91r	Capital taxes (receivable)	Total taxes
D.92r	Investment grants (receivable)	Other capital revenue
D.99r	Other capital transfers (receivable)	Other capital revenue

	ESA uses and capital transactions	ESA GFS expenditure
P.2	Intermediate consumption	Intermediate consumption
D.1	Compensation of employees	Compensation of employees
D.2	Taxes on production and imports (payable)	Other current expenditure
D.3	Subsidies (payable)	Subsidies
D.41	Interest	Interest
D.4	Property income (excluding D.41)	Other current expenditure
D.5	Current taxes on income	Other current expenditure
D.62	Social benefits other than social transfers in kind	Social benefits other than ST in kind
D.632	Social transfers in kind via market producers	Social transfers in kind via market producers
D.7	Other current transfers	Other current expenditure
D.8	Adjustment for the change in pension entitlements	Other current expenditure

	ESA uses and capital transactions	ESA GFS expenditure
P.31	Individual consumption expenditure on market output	Social transfers in kind via market producers
P.31	Individual consumption expenditure on non-market output	Not accounted for in Total expenditure
P.32	Collective consumption expenditure	Not accounted for in Total expenditure
P.5	Gross capital formation	Capital expenditure
NP	Acquisition less disposal of non-produced assets	Capital expenditure
D.92p	Investment grant (payable)	Capital expenditure
D.99p	Other capital transfers (payable)	Capital expenditure

In the ESA central framework, net lending/net borrowing (B.9) is the balancing item of the capital account. The balancing item of general government in the ESA GFS presentation is identical to the net lending/net borrowing (B.9). This box explains why.

The ESA central framework

The first account is the production account, and therefore the first resource of an institutional sector in the ESA is its output. As the majority of services provided by government are not sold at economically significant prices and so are non-market, government output is measured by convention as the sum of production costs.

Similarly, final collective consumption expenditure, consisting of services provided to the community by government such as general services, defence, safety and public order, are measured as the sum of production costs. Also by convention, collective consumption expenditure (P.32) is equal to the actual final consumption (P.4) of government.

Final individual consumption expenditure of households provided directly by government on a non-market basis is also measured by its production costs.

As a result, two types of flows are 'imputed' in the ESA accounts of government:

(1) on the resources side, the non-market output, other (P.132) recorded in the production account;

(2) on the uses side, the actual final consumption (P.4) and the social transfers in kind — non-market production (D.631). They are recorded in the redistribution of income in kind account, and in the use of adjusted disposable income account.

Each imputed flow is equal to the sum of actual flows: the production costs. These two types of imputed flows, on the resource side and on the uses side, balance in the ESA sequence of accounts.

The ESA GFS presentation of statistics

The same basic transaction categories are used in the ESA GFS presentation, but mainly on the basis of actual monetary flows, to obtain the total revenue and the total expenditure of government. Only a selection of imputed flows is taken into account: imputed social contributions and capital transfers in kind.

Eliminating from the resources side the non-market output (P.132) to obtain total revenue, and eliminating from the uses side the actual final consumption (P.4=P.32) and the social transfers in kind — non-market production (D.631) to obtain total expenditure, results in the same balancing item: the net lending/net borrowing (B.9).

The only social transfers in kind that are accounted for in the GFS aggregate total expenditure of government are social transfers in kind provided to households via market producers (D.632), as they are subject to real payments of government units. Those transactions are also to be added to the sum of production costs (equal to non-market output, other — P.132) to obtain the final consumption expenditure of the general government.

P.3 = P.132 + D.632

Other revenue

20.85 Other current revenue consists of property income (D.4), other subsidies on production (D.39) and other current transfers (D.7).

20.86 Property income comprises interest (D.41), distributed income of corporations (dividends and withdrawals from income of quasi-corporations) (D.42) and, more marginally, reinvested earnings on foreign direct investment of government (D.43), other investment income (D.44) and rent (D.45).

20.87 Other current transfers (D.7) include mainly intra-government transfers. They shall be consolidated when drawing up the accounts of the sector as a whole.

20.88 Other capital revenue comprises investment grants (D.92) and other capital transfers (D.99) received from other units, predominantly from other government units (although consolidation carried out when presenting statistics may reduce their apparent size) and EU institutions, but also from other various units, reflecting transactions such as repayment by a debtor subsequent to the activation of a guarantee.

20.89 Grants, which are sometimes defined in other statistical systems as transfers other than subsidies received by one government unit from another government unit or an international organisation, are not an ESA category. Their amount should be equivalent to the sum of the following transfer revenue: D.73 + D.74 + D.92, together with D.75 + D.99 in some cases.

20.90 Subsidies received by government units consist only in other subsidies on production. When received by producing entities belonging to general government, subsidies on products are included in the valuation of the output and sales at basic prices.

Expenditure

20.91 An expenditure transaction is one that has a negative impact on net lending (+)/net borrowing (–). Total expenditure consists of current and capital expenditure. Current expenditure includes production related expenses (compensation of employees and intermediate consumption); property income payable (which is mainly interest); and transfer payments (such as social benefits, current grants to other governments, and miscellaneous other current transfers).

20.92 The total government expenditure of an accounting period is calculated using the following equation, summing transactions which are payable:

Total expenditure =		intermediate consumption	P.2
	+	compensation of employees	D.1
	+	interest	D.41
	+	social benefits other than social transfers in kind	D.62
	+	social transfers in kind via market producers	D.632
	+	subsidies	D.3
	+	other current expenditure	D.29 + (D.4 – D.41) + D.5 + D.7 + D.8
	+	capital expenditure	P.5 + NP + D.92 + D.99

Compensation of employees and intermediate consumption

20.93 Compensation of employees and intermediate consumption are costs of production for units of government.

20.94 Compensation of employees (D.1) includes wages and salaries (D.11) paid as well as employers' social contributions (D.12), including imputed social contributions, that are viewed in the ESA as uses of households and as resources of government, and thus not to be consolidated. Compensation is recorded on an accrual basis, at the time the work is done, and not at the time the wage is due for payment or paid. Wages include bonus and other lump sums (due to arrears or contract renewal) paid, and the relevant time of recording can be difficult to determine: when covering long periods of employment, it is often the time of determination of the bonus rather than the time period that the bonus is nominally intended to cover.

20.95 Intermediate consumption (P.2) comprises the goods and services consumed during the accounting period in the production process. It differs in concept from purchases, and other possible kinds of acquisitions: any acquisition enters inventories prior to being removed upon consumption. Goods and services may be acquired by market and non-market establishments of government as well.

20.96 In concept, the time of recording of intermediate consumption is clear: at the time the product is used up in the production process. The time of recording of purchases and other acquisitions is in concept the delivery, although there may be cases when delivery can be difficult to ascertain.

Social benefits expenditure

20.97 Social benefits expenditure consists of social benefits other than social transfers in kind (D.62), that, in turn, consist mainly of cash payments, and of social transfers in kind provided to households via market producers (D.632). Social transfers in kind via market producers are government expenditure financing goods and services provided to households by market producers. Typical examples are health care, and goods and services provided by doctors and pharmacists, financed by government units, through social security schemes or social assistance programmes.

20.98 Social benefits expenditure excludes social transfers in kind provided to households by non-market producers of government. Governments often produce services and goods and distribute them for free or at prices that are not economically significant. To avoid duplication, in the government finance statistics presentation, the relevant costs of production of these goods and services are recorded only once as expenditure — intermediate consumption, compensation of employees, other taxes on production — and as revenue — other subsidies on production. In the ESA sequence of accounts, these costs are balanced by a resource under non-market output, and recorded again as a use under final consumption expenditure (P.3) to be distributed as social transfers in kind. It can be relevant, for analytical purposes, to calculate a broader aggregate of social transfers to include the latter: social benefit in cash (D.62) plus social transfers in kind (D.63).

20.99 In the ESA, even when retirement benefits paid to government employees are considered as the liquidation of a government liability (see section 'Accounting issues relating to general government'), they are also recorded as a payment of current expenditure and the related contributions are included as revenue. However, when the scheme is funded, such contributions and benefits are considered to be financing, and so an adjustment for the change in pension entitlements (D.8) is added to expenditure: it is equal to social contributions received as pensions or other retirement benefits less social benefits paid for pensions or other retirement benefits for those schemes the obligations of which are recognised as liabilities.

Interest

20.100 Interest expenditure includes what is due for the cost of incurring liabilities, notably on loans, bills, notes and bonds, but also on deposit liabilities or other instruments that are liabilities of government. Interest is recorded on an accrual basis (see section 'Accounting issues relating to general government').

20.101 Interest expenditure is adjusted for FISIM in the ESA-based government finance statistics. Interest paid to financial institutions on loans and deposits is partitioned into a service component, which is recorded as intermediate consumption, and a property income component which is recorded as interest paid. The same adjustment applies to government interest revenue paid by financial institutions on deposits or loans.

Other current expenditure

20.102 Other current expenditure comprises other taxes on production (D.29), property income other than interest (D.4-D.41), current taxes on income and wealth etc. (D.5), other current transfers (D.7) and the adjustment for the change in pension entitlements (D.8).

20.103 Whereas other taxes on production paid by units of government are recorded as government expenditure, taxes on products are not separately shown as government expenditure. This is because, on the one hand, such taxes, not being a resource for market producers of government, whose output is valued at basic prices, do not appear under their uses, and, on the other hand, taxes on products entering intermediate consumption of government are included in its valuation at purchasers' prices.

Capital expenditure

20.104 Capital expenditure comprises capital transfers, in the form of investment grants (D.92) and other capital transfers (D.99), as well as investment expenditure: gross capital formation (P.5, which consists of gross fixed capital formation — P.51g, plus changes in inventories — P.52, and acquisitions less disposals of valuables — P.53); and acquisitions less disposals of non-produced non-financial assets (NP). Disposals of non-financial assets, such as buildings, are not recorded as revenue, but as negative capital expenditure, making the net lending/net borrowing (B.9) more positive.

Link with government final consumption expenditure (P.3)

20.105 Making the link between total government expenditure and its components with government final consumption expenditure (P.3) is important for users of fiscal and other macroeconomic statistics.

20.106 Final consumption expenditures by general government are equal to the total of their output (P.1), plus the expenditure on products supplied to households via market producers (i.e. social transfers in kind — D.632), minus the sales of goods and services (P.11+P.12+P.131).

20.107 The output of government — market output, own account capital formation and non-market output — is equal to the sum of its costs of production (compensation of employees, intermediate consumption, consumption of fixed capital, and taxes on production paid net of subsidies on production received), plus the net operating surplus (B.2n) generated by market establishments of government.

20.108 Thus, the following calculation gives final consumption expenditures using selected items of government expenditure and revenue, as well as the net operating surplus (B.2n):

	compensation of employees (D.1)
plus	intermediate consumption (P.2)
plus	consumption of fixed capital (P.51c1)
plus	other taxes on production, payable (D.29 U)
less	other subsidies on production, receivable (D.39 R)
plus	operating surplus, net (B.2n)
equals	output (P.1)

and:

	output
less	sales of goods and services (P.11+P.12+P.131)
plus	social transfers in kind via market producers (D.632)
equals	final consumption expenditure (P.3)

Government expenditure by function (COFOG)

20.109 A classification of expenditure transactions using the classification of functions of government (COFOG) is integral to the government finance presentation: it is a major analytical instrument of government expenditure, especially useful for international comparisons. This classification shows the purpose for which expenditure transactions are undertaken. Such purposes differ from the administrative arrangement of governments, for example an administrative unit responsible for health services can undertake activities with an educational purpose, such as training of medical professionals. A cross presentation of government transactions by economic nature (the usual ESA classification) and according to functions is requested.

20.110 The COFOG classification describes government expenditure according to 10 major functions set out below, and according to two additional levels of increased detailed breakdown not presented here. As an example, the second level is necessary to provide information on research and development expenditure, as well as to provide information on government expenditure dedicated to the risks and social needs of social protection.

20.111 The COFOG classification is consistent with the distinction made between collective non-market services and individual non-market services provided by government: the six first functions correspond to collective services, as well as some limited parts of the others. This enables government final collective consumption expenditure to be calculated. The total expenditure aggregate and the expenditure transactions broken down by function are consistent with those in the ESA government finance statistics. Therefore, it does not include social transfers in kind — non-market production (D.631), already accounted for with production costs of government.

Table 20.1 — COFOG, the 10 functions of government

Code	Function	Type of service
01	General public services	Collective
02	Defence	Collective
03	Public order and safety	Collective
04	Economic affairs	Collective
05	Environmental protection	Collective
06	Housing and community amenities	Collective
07	Health	Mainly individual
08	Recreation, culture and religion	Mainly collective
09	Education	Mainly individual
10	Social protection	Mainly individual

Balancing items

The net lending/net borrowing (B.9)

20.112 The government net lending (+)/net borrowing (–) (B.9) is the difference between total revenue and total expenditure. It is equal to the balancing item of the capital account (B.9N) in the ESA accounts. It represents the amount the government has available to lend or must borrow to finance its non-financial operations.

20.113 Net lending (+)/net borrowing (–) is also the balancing item of the financial account (B.9F in the central framework). In concept, it is the same as the balancing item of the capital account, although in practice a statistical discrepancy can occur.

20.114 The term 'net lending/net borrowing' is a sort of terminological shortcut. When the variable is positive (meaning that it shows a financing capacity), it should be called net lending (+); when it is negative (meaning that it shows a borrowing need), it should be called net borrowing (–).

Changes in net worth due to saving and capital transfers (B.101)

20.115 The difference between all transactions that affect net worth during the accounting period is the balancing item: changes in net worth due to saving and capital transfers (B.101).

20.116 The changes in net worth due to saving and capital transfers provide a useful measure of government accounts and policies as they represent the resources acquired or consumed in the government's current operations.

20.117 The changes in net worth due to saving and capital transfers equal net lending/net borrowing plus net acquisition of non-financial assets (P.5 + NP) minus consumption of fixed capital (P.51c1).

	Net saving plus capital transfers (B.101)
less	acquisitions less disposals of non-financial assets (P.5+NP)
plus	consumption of fixed capital (P.51c1)
equals	net lending/net borrowing (B.9)
equals	transactions in financial assets less liabilities (financing)

Financing

20.118 The financial account of government in the GFS records the transactions in financial assets and liabilities as described in Chapter 5.

Transactions in assets

20.119 Currency and deposits (F.2) reflects mainly movements in government deposits at banks, notably at central banks, which can fluctuate substantially from one period to another, in particular due to Treasury operations. Other government units such as local government and social security funds also hold substantial deposits in bank accounts.

20.120 Debt securities (F.3) mainly reflect net purchases of bills, notes or bonds issued by banks, non-financial corporations, or non-residents including foreign governments, the purchases being carried out predominantly by asset-rich social security funds or other reserve funds. Government purchases of bonds issued by other resident government units are reported under this heading in a non-consolidated presentation, but are excluded from this heading in a consolidated presentation, being reported instead as debt redemption.

20.121 Loans (F.4) include, in addition to loans to other government units, lending to foreign governments, public corporations, and students. Loan cancellations are also reflected here with a counterpart entry under capital transfer expenditure. Loans granted by government not likely to be repaid are recorded in the ESA as capital transfers, and are not reported here.

20.122 Equity and investment fund shares (F.5) capture acquisitions less disposals of equity in corporations by government units. These may reflect equity injections in public corporations or portfolio investments, privatisation proceeds or superdividends. They consist mainly of the following:

(a) equity injections (generally in the form of cash) to specific public corporations where government is acting as an investor with the expectation of a return on invested funds. Such injections are not considered as government expenditure in national accounts;

(b) portfolio investments, in the form of purchases of quoted shares on the market made by government units such as asset-rich social security funds, or other portfolio investment operations;

(c) net investment in mutual funds, which are alternative investment vehicles. In particular, placements in money market mutual funds are reported here, rather than under currency and deposits, despite being close substitutes for bank deposits;

(d) privatisations conducted by special privatisation agencies, as such entities are classified to general government;

(e) distributions by public corporations to their owners in excess of their operational profit excluding holding gains/losses, recorded as financial transactions as withdrawal of equity akin to a partial liquidation of the enterprise, rather than as government revenue.

20.123 Transactions in other accounts receivable (F.8) capture the impact of the accrual principle applicable in the ESA of recording transactions when the obligation to pay arises, not when the payment is actually made, even though public accounts or budget recordings have long been cash-based in most countries. The impact on the financing needs of government does not directly arise from the deficit, as government revenue can be cashed, or government expenditure can be settled, at accounting periods different from the economic transaction itself. Other receivables include receivables of taxes and social contributions as well as amounts concerning EU transactions (amounts paid by government on behalf of the EU but not yet reimbursed by the EU), trade credits or advances for expenditure, such as military equipment or rare occasions of wages or benefits paid one month in advance, etc. Whereas, in concept, such assets are temporary in nature, and they necessary individually disappear after a lapse of time, the flow reported for a sector, such as general government, do usually average above zero even over a period of time, because the stock of receivables tends to grow with rest of the economy.

20.124 In most countries, monetary gold and SDRs are managed by the central bank. When they are managed by government, they are recorded in the financial account of government.

20.125 Financial transactions are recorded at the transaction values, that is, the values in national currency at which the financial assets and/or liabilities involved are created, liquidated, exchanged or assumed between institutional units, on the basis of commercial considerations only.

20.126 The transaction value refers to a specific financial transaction and its counterpart transaction. In concept, the transaction value is to be distinguished from a value based on a price quoted in the market, a fair market price, or any price that is intended to express the generality of prices for a class of similar or even identical financial assets and/or liabilities. The value to report in the financial accounts for a loan sold on the secondary market is the value for which the loan was sold, and not the nominal value, and the reconciliation with the balance is entered in the other changes in assets accounts.

20.127 However, in cases where the counterpart transaction of a financial transaction is, for example, a transfer and therefore the financial transaction is undertaken other than for purely commercial considerations, the transaction value is identified with the current market value of the financial assets and/or liabilities involved. Thus, a loan purchased by a government at its nominal value, rather than at its fair or written-down value, is partitioned between an entry as a loan in the financial accounts at the fair value and a capital transfer, in recognition of a transfer of wealth by the government.

20.128 The transaction value does not include service charges, fees, commissions, and similar payments for services provided in carrying out the transactions; such items are to be recorded as payments for services. Taxes on financial transactions are also excluded and treated as taxes on services within taxes on products. When a financial transaction involves a new issue of liabilities, the transaction value is equal to the amount of the liability incurred exclusive of any prepaid interest. Similarly, when a liability is extinguished, the transaction value for both creditor and debtor must correspond to the reduction of the liability.

Transactions in liabilities

20.129 Transactions in liabilities are recorded at the value at which the liabilities are issued, or redeemed. This value may not be the nominal value. A transaction in liabilities includes the impact of interest accrued.

20.130 The repurchase by a unit of a liability is recorded as redemption in liabilities and not as an acquisition of assets. Likewise, at a subsector or sector level, the purchase by a government unit of a liability issued by another unit of the subsector in question will be presented in the consolidated presentation, as redemption of liability by that subsector.

20.131 Financial leasing and public-private partnerships (PPP) contracts when the asset is on government balance sheet imply recognising a debt of the lessee or grantor. Payments on such leases or PPP contracts are not expenditure for the full amounts, but debt servicing: redemption of a loan and interest expenditure.

20.132 Financing presented as long-term trade credits or accounts receivable/payable arrangements are to be classified as loans, because these involve the provision of long-term financing to the benefit of the borrowing party that is distinguished from a treasury facility that sellers commonly provide buyers with short-term trade-credit. In extending the maturity of the payment obligation considerably, the constructor assumes a financial role that is separate from its other activity of producer.

20.133 Lump sums exchanged at inception on off-market swaps are classified as loans (AF.4) when the lump sum is received by government. Off-market swaps are partitioned in the balance sheet into a loan component and a regular, 'at-the-money' swap component.

20.134 Similarly to receivables, transactions in other accounts payable reflect the time impact of the accrual principle, but on the liability side: when expenditure is incurred but not yet paid, or when payments are made in advance of the revenue recording. In addition to trade credit when they are short-term, payables include sums received from the EU but not yet paid out by government to the final beneficiary, prepayments in taxes or tax refunds not yet paid out.

Other economic flows

20.135 Both the other changes in volume of assets account and the revaluation account of the ESA GFS are identical to the accounts described in Chapter 6. All changes in assets and changes in liabilities arising from events other than economic transactions are recorded in one of these accounts.

Revaluation account

20.136 Revaluations are the same as described in Chapter 6. Additional relevant information as memoranda items, for example, revaluations in the equity of public corporations held by government units, are likely to be particularly important and, at the same time, difficult to measure because it is unlikely that there will be any market prices.

20.137 In the ESA, balance sheets entries are ideally at market value, apart from one or two specific instruments, and movements in interest rates reflected in stock market indices lead to noticeable changes in value of stock as well as in the net worth of institutional units. Such changes are not income in the ESA, and so they are not government revenue or expenditure, and do not affect government deficit/surplus. The changes are recorded in the revaluation account, which leads to changes in net worth due to nominal holding gains/losses (B.103). The changes in net financial worth of government during an accounting period are substantially affected by revaluations. The main sources of revaluations affecting net financial worth are, apart from the impact of foreign exchange denominated assets and liabilities, as follows:

(a) real estate assets of government;

(b) equity of government;

(c) security liabilities.

20.138 When a capital injection by government into a public corporation is considered a capital transfer, the equity valuation of the government stake in the beneficiary will generally increase, with entries in the revaluation account and not the financial account.

20.139 When an existing loan or trade credit is sold to another institutional unit the difference between the redemption price and the transaction price is recorded in the revaluation account of the seller and the purchaser at the time of transaction.

Other changes in volume of assets account

20.140 The other changes in volume of assets accounts include flows that are neither economic transactions nor revaluations. For example, it captures the impact of a change in sector classification of units.

20.141 Loans write-off which do not reflect a debt cancellation with an explicit or implicit bilateral agreement are not transactions and are recorded in the other changes in the volume of assets account, with no impact on net lending/net borrowing.

Balance sheets

20.142 The same definition of an asset is used in the GFS general government accounts as in Chapter 7. The classification and value of assets and liabilities are identical in the ESA and the ESA-based GFS.

20.143 The sum of liabilities may be considered as a stock of debt. However, the definition of government debt in the context of fiscal surveillance departs from the total stock of liabilities in the ESA and in the GFS, both in terms of scope of liabilities accounted for and in terms of valuation.

20.144 Some assets are more specific to government: heritage assets, like historic monuments; infrastructure assets, such as roads and communications facilities; and equity stakes in public corporations that are without private equivalent.

20.145 On the liability side, equity liability (AF.5) will not normally be recorded for government units. However at a more aggregated level of government subsectors, equity liability can appear if entities have been classified inside the general government sector, as a result of the market/non-market test.

20.146 Net worth is the balancing item (B.90) of the balance sheet:

Net worth	=		Total assets
		minus	Total liabilities

20.147 Own funds are the sum of net worth (B.90) and equity (AF.5) issued. Thus, in the ESA, own funds of units is defined as assets less liabilities excluding equity liabilities, while net worth is defined as assets less liabilities including equity liabilities. The ESA net worth is not the same as business accounting shareholders' equity or net worth. Business accounting net worth is closer in concept to the ESA own funds.

20.148 Where the net worth (B.90) of the general government sector cannot be calculated — due to the lack of information for measuring the stock of non-financial assets — the financial net worth (BF.90) is presented, showing the difference between the total financial assets and the total liabilities.

20.149 The ESA values balance sheet at market value, except for three specific instruments: currency and deposits (AF.2), loans (AF.4) and other accounts receivable/payable (AF.8). For those three instruments, the values recorded in the balance sheets of both creditors and debtors are the amounts of principal that the debtors are contractually obliged to repay to the creditors, even in cases where the loan was traded at a discount or premium, including interest accrued.

20.150 Security liabilities are valued at market value. Even though the debtor is only obligated for the value of the principal, the market value is significant because the debtor is obligated to pay a stream of future cash flows, for which the present value varies according to market yield, and the market value reflects the price that government would have to pay if it redeemed the instrument by purchasing it back on the market.

20.151 Quoted equity is valued using the most recent quotation price when drawing up the balance sheet. Unquoted equity can be valued by comparing ratios such as own funds at book value to the market value of equity, in similar classes of quoted companies. Other approaches can be used for valuing unquoted equity, such as using the own funds of the corporation, thus setting the net worth to zero. This approach can be used for public corporations that have unique types of activities such as when government has equity stakes in central banks. However, it is not recommended to use the own funds at book value, without adjustments, no more than using the nominal value of the issued equity.

Consolidation

20.152 Consolidation is a method of presenting the accounts for a set of units as if they constituted one single entity (unit, sector, or subsector). It involves eliminating transactions and reciprocal stock positions and associated other economic flows among the units being consolidated.

20.153 Consolidation is important for the general government sector and its subsectors. For example, assessing the overall impact of government operations on the total economy or the sustainability of government operations is more effective when the measure of government operations is a set of consolidated statistics. To relate government aggregates to the economy as a whole as in revenue or expenditure to GDP ratios, it is better to eliminate the internal churning of funds and include only those transactions that cross the boundaries with other domestic sectors and with the rest of the world sector. This is of particular relevance for the following transactions:

(a) property income such as interest;

(b) current and capital transfers;

(c) transactions in financial assets and liabilities.

20.154 Consolidation does not affect balancing items because the consolidated items appear symmetrically within each account. For example, a grant from a central government to a local government unit is consolidated by eliminating the expenditure from central government and the revenue from the local government, thus leaving unchanged the net lending/net borrowing of general government.

20.155 Conceptually, the nature of consolidation is to eliminate all flows among the consolidated units, but practicality should be kept in mind. In concept, transactions in the production account, such as sales and purchases of goods and services, may not or cannot be consolidated. The decision about the level of detail employed in consolidation should be based on the policy usefulness of the consolidated data and the relative importance of the various types of transactions or stocks.

20.156 When drawing up the consolidated accounts of government, the ESA prescribes consolidating the following major transactions (in order of importance):

(a) current and capital transfers, such as central governments grants to lower levels of government;

(b) interest arising on intergovernmental holdings of financial assets and liabilities;

(c) transactions, other economic flows and stocks in financial assets and liabilities, such as loans to other governments or acquisitions of government securities by social security units.

20.157 Purchases/sales of goods and services between government units are not consolidated in the ESA. This is because the accounts show sales on an output basis, and not on a disposal basis so that it is difficult to decide who is the counterpart transactor for this output. In addition, intermediate consumption and output follow two different valuation rules, basic prices and purchasers' prices, which creates additional difficulties.

20.158 Taxes or subsidies paid by one government unit or entity to another are not to be consolidated. However, taxes or subsidies on products cannot be consolidated in the system because there is no counterpart sector transactor in the ESA for such transactions; the relevant amounts are not separately recognised as expenditure and revenue (respectively) and are instead included in, or excluded from, the value of the intermediate consumption or of the sales.

20.159 Acquisitions/disposals of non-financial assets, including intergovernmental transactions in land, buildings, and equipment are not consolidated, because they already appear on a net basis in the account: acquisitions less disposals. Non-consolidated and consolidated accounts always show equal amounts for those items.

20.160 Some types of transactions that appear to take place between two government units are never consolidated because they are rerouted in the system to other units. For instance: employer social contributions, whether paid to social security or to government pension funds, are treated as being paid to the employee as part of compensation and then paid by the employee to the fund. Taxes withheld by government units from the compensation of their employees, such as pay-as-you-earn (PAYE) taxes, and paid to other government subsectors are treated as being paid directly by the employees. The government employer is simply the collecting agent in this case for the second government unit.

20.161 Practical difficulties arise with consolidation. For example, when a transaction to be consolidated is identified in the records of one unit, it is expected that the corresponding transaction will be found in the accounts of the counterparty; but it may not show there, as it may be recorded in a different period, it may have a different value, or it may be classified as a different type of transaction due to different accounting practices. These difficulties are inherent in the quadruple system of recording used in the ESA, but they may be more obvious with inter-governmental transactions.

Accounting issues relating to general government

20.162 National accounts principles apply to the general government sector in the same way as to other sectors of the economy. However, due to the economic nature of the activities of government units or due to practical considerations, additional rules are given in this section.

20.163 Similarly, the national accounts principles apply in the same way to the measurement of government revenue and government expenditure. However, these principles, including notably the accrual principle, are applied given that the creditworthiness and liquidity constraints of government are fundamentally different from other measures. If expenditure is recorded in the government accounts when incurred by each government unit, irrespective of long lags of payment, revenue should be recorded in the accounts only when there is a high expectation and sufficient certainty that the respective cash flows will effectively take place.

20.164 When classifying a transaction, national accountants are not constrained by the designation of the transaction in the public accounts of government or in the bookkeeping of a corporation. As an example, a large payment to government made out of the corporation's reserves or from sales of assets and called 'dividend' in the public accounts is categorised as a super-dividend and recorded as a financial transaction in the national accounts — it is a withdrawal of equity. Reporting the economic reality where it is different from the legal form is a fundamental accounting principle to give consistency and to make sure that transactions of a similar type will produce similar effects on the macroeconomic accounts, irrespectively of the legal arrangements. This is of particular importance for transactions involving the general government.

Tax revenue

Character of tax revenue

20.165 Taxes are compulsory unrequited payments, in cash or in kind, made by institutional units to general government or supranational bodies exercising their sovereign or other powers. They usually constitute the major part of government revenue. Taxes are viewed in the system as transactions, as they are deemed to be interactions between units carried out by mutual agreement. Taxes are described as unrequited because the government provides nothing commensurate with the payment in exchange to the individual unit making the payment.

20.166 However, there are cases where the government provides something to the individual unit against the payment, in the form of the direct granting of a permit or authorisation. In this case, the payment is part of a mandatory process that ensures proper ownership recognition and performance of activities by law. The categorisation of such payments as a tax, or as the sale of a service, or the sale of an asset by the government, requires additional rules. Those rules are set out in Chapter 4.

Tax credits

20.167 Tax relief can take the form of a tax allowance, exemption, or deduction — which is subtracted from the tax base — or of a tax credit — which is subtracted directly from the tax liability otherwise due by the beneficiary household or corporation. Tax credits can be payable, in the sense that any amount of the credit that exceeds the tax liability will be paid to the beneficiary. In contrast, some tax credits are non-payable, and described as 'wastable'. They are limited to the size of the tax liability.

20.168 In national accounts, a tax relief that is embedded in the tax system is recorded as reducing the tax liability and therefore as reducing government tax revenue. This is the case of tax allowances, exemptions, and deductions, as they enter directly into the calculation of the tax liability. This will also be the case for non-payable tax credits as their value to the taxpayer is limited to the size of their tax liability. In contrast, this is not the case for payable tax credits, which by definition can affect non-taxpayers as well as taxpayers. As they are payable, payable tax credits are classified as expenditure and recorded as such for their total amount. The government tax revenue will, therefore, be that liable, with no reduction for payable tax credits awarded, and government expenditure will include all payable tax credits awarded. This has no impact on the net borrowing/net lending of the general government, but does have an impact on both the tax burden and the government expenditure, and on the corresponding ratios to GDP. The presentation of statistics shall permit the derivation of tax credits on a net basis.

Amounts to record

20.169 Appropriately recording tax revenue is essential for the measurement of government activities and performance. The amounts to record should correspond to amounts likely to be actually collected by government: this implies that amounts declared but deemed uncollectible should not be recorded as revenue.

Amounts uncollectible

20.170 In all cases, only amounts that government realistically expects to collect should be recorded. Uncollectible taxes should not be accounted for in the net lending/net borrowing of the general government and generally not in the total revenue. Accordingly, the impact on general government net lending/borrowing of taxes and social contributions recorded in the system on an accrual basis shall be equivalent over a reasonable amount of time to the corresponding amounts actually received. The rules for the recording of taxes and social contributions are explained in Chapter 4.

Time of recording

Accrual recording

20.171 Accrual accounting records flows at the time economic value is created, transformed, exchanged, transferred or extinguished. It is different from cash recording and, in principle, from due-for-payment recording, defined as the latest time payments can be made without additional charges or penalties. Any period of time between the moment a payment accrues and the moment it is actually made is accounted for by recording a receivable or a payable in the financial accounts. The ESA recording is on an accrual basis. For some transactions such as payment of dividends or some specific transfers, the due for payment time is used.

Accrual recording of taxes

20.172 For government, recording revenue and claims at the time of the underlying event is particularly difficult, since often government records, for tax for example, are on a cash basis. When accrued taxes are calculated from assessments of taxes due, there is a risk of over-recording the tax revenue, a crucial government finance aggregate.

20.173 The period of time between the moment a transaction is recorded as accruing in the non-financial accounts, and the moment the payment is actually made, is bridged by recording an account receivable in the financial account in the accounts of one party and an account payable in the accounts of the other party. In cases where a prepayment, covering two or more accounting periods, is made to government, an account payable, which is a form of borrowing, is recorded in the financial account of government for the amounts due in future periods. This liability is extinguished when recording the due amounts of the transaction in the future periods. However, recording such a liability occurs only when the government has, legally or by means of a constructive obligation, the obligation to make a refund to the payer for the pre-paid amounts if the taxable event does not occur.

20.174 In accordance with accrual recording, taxes should be recorded when the activities, transactions or other events occur which create the liability to pay tax — in other words when the taxable events occur — and not when the payments are due to be made or are actually made. This time is usually when income is earned or when a transaction (such as the purchase of goods and services) generating the liability occurs, to the extent that the tax liability can reliably be measured. The different institutional arrangements for taxation (existence or not of assessments, like tax rolls) may lead in practice to using different recording methods, according to the characteristic of the tax. Thus, notably when there are no reliable assessments available or amounts unlikely to be collected cannot be reliably estimated, the time-adjusted cash method is considered an acceptable proxy for accruals.

20.175 In practice, when taxes are based on assessments, some flexibility is permitted concerning the time of recording where the measurement cannot be made in a reliable way before the time of assessment. In particular, for taxes on income, tax systems may require the development of a tax roll or another form of tax assessment before the amounts of tax due will be known in a reliable way, taking into account the changes in tax rates and final settlements. This moment, which might be the one where the economic behaviour of households is affected, is an acceptable time of recording. It is not necessarily the accounting period in which the payment is received.

Interest

20.176 Interest is an expenditure incurred by a debtor for the use of another unit's funds. Under the terms of the financial instrument agreed between them, interest (D.41) is the amount that the debtor becomes liable to pay to the creditor over a given period of time without reducing the amount of principal outstanding.

20.177 Interest is classified within property income (D.4). Differently to dividends (D.421), interest (D.41) entitles the holder/the lender to a fixed and predetermined income (or according to an agreed reference in the case of a floating interest rate). Interest is usually a major expense item of general government, since governments are often structural borrowers on the market.

20.178 In the system, interest is recorded on an accrual basis, i.e. interest is recorded as accruing continuously over time to the creditor on the amount of principal outstanding.

20.179 There are two ways in which the value of a discounted security can be determined during its life when the prevailing interest rate is different from the rate prevailing when the security was initiated. The debtor approach is from the perspective of the unit issuing the security and the creditor approach is from the perspective of the unit holding the security. From the debtor approach, the interest rate agreed on initiation is used throughout the life of the security. From the creditor approach, the current interest rate is used to value the interest between any two points in the life of the security.

20.180 Accrual interest is recorded according to the debtor approach, that is: based on the rate or yield prevailing at the time of creation of the financial instrument. Thus, interest expenditure to be recorded on fixed-rate debt securities does not vary over time in sympathy with market fluctuations, despite the fact that the market value of the securities fluctuates and that, accordingly, the opportunity costs of carrying this debt vary. In that way, interest expenditure avoids the volatility that the creditor approach entails. The repurchase of securities on the market, at a premium or at a discount to the principal outstanding, does not lead to any entry in revenue or expenditure at time of purchase or later on. Instead, any repurchase premium or discount reflects the settlement, recorded in the financial accounts, of a holding gain or loss that accrued in the past and was recorded in the revaluation accounts at that time.

20.181 Recording interest as accruing continuously has the consequence, on a security for instance, that the accrued interest charge is recorded starting from the time the security has been issued, not waiting for the time of the first coupon payment (often in the following year, in the classic case of a security with a yearly coupon payment). It means also that accrued interest on securities starts appearing as a liability as soon as issued interest is reinvested under the financial asset bearing it. As a result, the stock of accrued interest outstanding is always to be added to the value of the principal of the underlying instrument, and, subsequently, any interest payments reduce the debtor's liability. This basic principle covers all financial instruments bearing interest.

20.182 In many countries, government bonds or notes are issued in fungible tranches, over several years, with the same conditions concerning the nominal rate of interest. Because the market yield at time of further sale of tranches varies, each tranche is actually sold at a premium or at a discount. Thus, the rate of interest agreed on at time of issuing the bond is used for calculating interest, which will vary for each tranche, reflecting different amortisations of premium or discounts at issue, in a manner similar to amortisation of discounts on zero coupon bonds.

20.183 The issue price of bonds and notes issued in fungible tranches, and carrying coupons, includes an amount for coupons accrued to date, which are in effect 'sold' upon issuance. Such sold coupons are neither government revenue at time of sale nor treated as a premium. They are instead seen as a financial advance.

Discounted and zero-coupon bonds

20.184 Zero-coupon bonds are instruments where the debtor has no obligation to make any payments to the creditor until the redemption of the bond. The amount of the principal borrowed is lower than the value of the bond that will be repaid by the debtor. In effect, the debtor's liability is discharged by a single payment at maturity covering both the amounts of the principal and the interest accrued over the life of the instrument. The difference between the amount repaid at the end of the contract and the amount initially borrowed is interest and is allocated over the accounting periods between the beginning and the end of the contract. The interest accruing each period is treated as if paid by the debtor and then reinvested as an additional amount of the same liability. Interest expenditure and increases in the liability are then simultaneously recorded each period.

20.185 The gradual increase in the market value of a bond that is attributable to the accumulation of accrued and reinvested interest reflects a growth in the principal outstanding, that is, in the size of the asset.

20.186 The same principle applies to discounted bonds or bonds issued at a premium. In this case, the interest expenditure to be recorded is the amount of accrued coupon interest as specified in the contract, plus the amount accruing each period attributable to the difference between the redemption price and the issue price.

Index-linked securities

20.187 Index-linked securities are financial instruments, usually long-term bonds, for which the amounts of the periodic payments and/or the principal are linked to a price index or other index. Any additional payments to creditors due to changes in the index are considered as interest, including the uplift of the principal, to be recorded as accruing continuously. When the value of the principal is index linked, the difference between the eventual redemption price and the issue price is treated as interest accruing over the life of the asset, in addition to any interest due in that period.

Financial derivatives

20.188 Settlements on swap transactions are not considered as property income in the ESA. The settlements related to financial derivatives are financial transactions, to be recorded at the time of the effective exchange of financial instrument.

Court decisions

20.189 When a court of justice rules that compensation must be paid, or a transaction reversed, resulting from or related to past events, the time of recording of the expenditure or revenue is when the claimants have an automatic and incontrovertible right for a given amount that can be individually determined, and when it is unlikely that claimants will fail requesting their due. When a court of justice merely sets a principle of compensation, or when the claims must be reviewed for eligibility and in relation to determination of the amount by administrative services, expenditure or revenue is recorded as soon as the value of the obligation is reliably determined.

Military expenditure

20.190 Military weapon systems, comprising vehicles and other equipment such as warships, submarines, military aircrafts, tanks, missile carriers and launchers etc. are used continuously in the production of defence services. They are fixed assets, like those used continuously for more than one year in civilian production. Their acquisition is recorded as gross fixed capital formation, i.e. as capital expenditure. Single-use items, such as ammunition, missiles, rockets and bombs are treated as military inventories. However, some types of ballistic missiles are regarded as providing an on-going service of deterrence and therefore meet the general criteria for classification as fixed assets.

20.191 The time of recording of asset acquisition is the time of the transfer of the ownership of the asset. In case of long-term contracts involving complex systems, the time of recording of the transfer of assets should be upon actual delivery of the assets, not the time of cash payments. If some long-term contracts cover in addition the provision of services, government expenditure should be recorded at the time of the provision of services, recorded separately from the provision of assets.

20.192 If military equipment is leased, the transaction is invariably recorded as a finance lease and not as an operating lease. This implies that the recording of an acquisition of military asset is matched by the incurrence of an imputed loan by the government lessee. As a result, payments by government are recorded as debt servicing, a part as repayment of the loan, another part as interest.

Relations of general government with public corporations

Equity investment in public corporations and distribution of earnings

20.193 Government units have a close relationship with public corporations and quasi-corporations that they own. Despite this close relationship, flows between a government unit and its controlled corporation or quasi-corporation related to its equity investment are treated in the same way as flows between any corporation and its owners: equity investments from the investor into the unit invested in; distributions of earnings by the unit invested in, to the investor.

Equity investment

20.194 An equity investment occurs when economic agents place funds at the disposal of corporations, in exchange for a promise of future dividends or other types of return. The amount invested is known as equity capital, and is part of the own funds of the corporation and the corporation has a large degree of freedom in the way of using them. In exchange, the owners receive shares or some other form of equity. These represent property rights on corporations and quasi-corporations and entitle the holders to:

(a) a share of any dividends (or withdrawals of income from quasi-corporations) paid at the choice of the corporation but not to a fixed and predetermined income; and

(b) a share in the net assets of the corporation in the event of its liquidation

and, as such, the shares are financial assets.

20.195 It is important to distinguish between the withdrawal of equity by the corporation to its owner and the return on equity investment, notably the income earned in the form of dividends. Only regular distributions from the entrepreneurial income are recorded as dividends by corporations or withdrawals of income from quasi-corporations. Large and irregular payments to the owner are recorded as a withdrawal of equity.

20.196 It is necessary to determine when payments of government into public corporations are government expenditure or acquisition of an asset and so a financial transaction, and conversely when distributions to government by public corporations are government revenue or a financial transaction.

Capital injections

Subsidies and capital injections

20.197 Subsidies are current transfers, usually made on a regular basis, from government, or occasionally from the rest of the world, to producers designed to influence their levels of production, the prices at which their outputs are sold or the remuneration of factors of production.

20.198 Payments to public corporations on a large and irregular basis, often called ‘capital injections’, are not subsidies. They are events that aim at capitalising or re-capitalising the beneficiary corporation, being put at the disposal of the latter in a long term perspective. According to the ‘capital injection test’, such capital injections are either capital transfers or acquisitions of equity, or a combination of both. The two cases are as follows.

(a) A payment to cover accumulated, exceptional or future losses, or provided for public policy purposes, is recorded as a capital transfer. Exceptional losses are large losses recorded in one accounting period in the business accounts of a corporation, which usually arise from downward revaluations of balance sheet assets, in such a way that the corporation is under threat of financial distress (negative own funds, breach of solvency, etc.).

(b) A payment where the government is acting as a shareholder in that it has a valid expectation of earning a sufficient rate of return, in the form of dividends or holding gains is an acquisition of equity. The corporation must enjoy a large degree of freedom in how it uses the funds provided. When private investors are part of the capital injection, and the conditions for private and government investors are similar, this is evidence that the payment is likely to be acquisition of equity.

20.199 In many cases, payments made by government units to public corporations are intended to compensate for losses in the past or in future. Government payments are treated as an acquisition of equity only if there is sufficient evidence of the corporation's future profitability and its ability to pay dividends.

20.200 Given that capital injections increase the own funds of the unit invested in, it is likely to also lead to an increase of the investor's equity stake in the invested unit. This is automatically the case of those 100 % owned public corporations whose equity is the value of their own funds. Such an increase in equity is not used as a criterion to judge the nature of the capital injection; instead, it leads to an entry in the revaluation account when the injection is recorded as capital transfer, and to an entry in the financial accounts when the injection is recorded as addition to equity.

Rules applicable to particular circumstances

20.201 Capital injections carried out in the context of privatisation, when privatisation is expected to occur in less than one year, are recorded as a transaction in equity for the amount not in excess of privatisation proceeds, the remainder being subject to the capital injection test. The proceeds of privatisation are then deemed to repay the capital injection.

20.202 Capital injections can be carried out by way of debt cancellation or debt assumption. Accounting rules applicable to those events result in the payment being a capital transfer, except for a privatisation when they are an acquisition of equity, the value of which is within the amount of privatisation proceeds.

20.203 Capital injections in kind, by way of the provision of non-financial assets, are without impact on net lending/net borrowing. When the injection is expected to earn a sufficient rate of return, it is treated as a change in structure (K.61), the asset provided entering the balance sheet of the corporation via the other change in volume of assets accounts. When the injection is not expected to earn a sufficient rate of return, a capital transfer (investment grant, D.92) is recorded together with a matching entry in disposal of non-financial assets (P.5 or NP).

Fiscal operations

20.204 Fiscal operations are carried out by government and financed through the budget under the usual budgetary procedures. However, some operations originated by government units may involve the intervention of entities not ruled by the legal government framework, including public corporations. Though they will not be reported in the budget, and might escape the usual control procedures, it is appropriate to record them within government revenue and expenditure. This is because the ESA recognises when government is the principal party to an operation and the public corporation is acting as an agent.

Public corporations distributions

Dividends versus withdrawal of equity

20.205 The earnings from equity investment in public corporations may be recorded as a distributive transaction which are usually dividends, or as a financial transaction. Dividends are property income. The resource available for distribution of dividends is the entrepreneurial income of the corporation. Thus, the resources from which dividends are paid would include neither the proceeds of sales of assets nor the distribution of revaluation gains. Dividends funded from, or based on, such sources are recorded as withdrawal of equity. The same basic principles apply to withdrawals from income of quasi-corporations.

20.206 Large and irregular payments or payments that exceed the entrepreneurial income of the year are called super-dividends. They are funded from accumulated reserves or sale of assets, and are recorded as withdrawal of equity equal to the difference between the payment and the entrepreneurial income of the relevant accounting period. In the absence of a measure of entrepreneurial income, the operating profit in business accounts is used as a proxy.

20.207 Interim dividends are recorded as property income (D.42) to the extent that they can be related to the accrued income of the corporation. In practice, two conditions must be fulfilled:

(a) the corporation making this payment makes short-period accounts available to the public and the payment is based on at least two quarters;

(b) the interim payment should be in the same proportion as the dividends paid in the previous years, consistent with the usual rate of return to the shareholder and with the trend in growth of the corporation.

If these conditions are not met, the interim payment is recorded as a financial advance, classified under other account receivable/payable (F.8), until the annual result is determined, given the need to conduct the super-dividend test of comparing the interim dividends with the entrepreneurial income of the year.

Taxes versus withdrawal of equity

20.208 Taxes have a legal basis and are under the control of legislative procedure. These transactions, which are by mutual agreement, constitute the main revenue of general government.

20.209 However, it may occasionally happen that a transaction described as a tax in legal documents is not recorded as such in the ESA. One example is the case of an indirect privatisation. If a public holding corporation sells its equity ownership in another public corporation and remits some of the proceeds to the government under the heading of tax, or is liable to a tax generated by the privatisation event and subsequent realised gains, under the heading of a capital gains tax, the payment is recorded as a financial transaction.

Privatisation and nationalisation

Privatisation

20.210 Privatisation commonly involves the sale by government of shares or other equity in a public corporation. Privatisation proceeds are not government revenue but a financial transaction recorded in the financial account, with no impact on the government deficit/surplus, as this event is net worth neutral and is a reclassification of assets (AF.5 against AF.2) in the balance sheet of government. A direct sale of non-financial assets, such as buildings and land rather than an entire corporation, is recorded in the capital account as disposals of fixed assets or non-produced non-financial assets, unless carried out in the context of corporate restructuring.

20.211 Any purchase of services to achieve this process should, however, be recorded as government intermediate consumption and should not be netted out of the privatisation proceeds. Thus, privatisation proceeds are to be recorded gross in the financial accounts.

Indirect privatisations

20.212 Privatisation can occur under more complicated institutional arrangements. For instance, assets of a public corporation may be sold by a public holding company, or another public corporation, controlled by government, and all or part of the proceeds are passed to government. In all cases, the payment to government of the proceeds on the sale of assets in this manner is to be recorded as a financial transaction, irrespective of the way it is presented in the books of the government or of its subsidiary, with a simultaneous decrease in shares and other equities corresponding to the partial liquidation of assets of the holding company. Any privatisation proceeds retained by the holding are privatisation receipts of government ploughed back by way of a capital injection, which is then subject to the capital injection test to determine the nature of the payment.

20.213 It may also happen that the public holding company, or other public corporation, acts as a 'restructuring agency.' In such a context, the proceeds of the sale may not be paid to government but kept by the restructuring agency to inject capital into other enterprises. When the restructuring unit, whatever its legal status, acts as a direct agent of government, its main function is to restructure and change the ownership status of public corporations and to channel funds from one unit to the other. The classification of the unit will normally be to the general government sector. However, when the restructuring unit is a holding company controlling a group of subsidiaries, and only a minor part of its activity is dedicated to channelling funds in the way described above, on behalf of government and for public policy purposes, the public holding company is classified in one of the corporations sectors according to its main activity, and the transactions made on behalf of government are to be rerouted through government.

Nationalisation

20.214 Nationalisation means government taking control of specific assets or an entire corporation, usually by acquiring the majority or the whole stake in the corporation.

20.215 Nationalisation usually takes the form of a purchase of shares: government buys all or part of the shares in the corporation at market price — or at a price sufficiently close, considering usual market practices with regard to valuation of corporations in the same activity. The transaction is by mutual agreement, even though the former owner may have little choice with regard to refusing the offer, or negotiating the price. The purchase of shares is a financial transaction to be recorded in the financial account.

20.216 Exceptionally, government may acquire ownership over a corporation through an appropriation or confiscation: the change in ownership of assets is not the result of a transaction made by mutual agreement. There is no payment to the owners, or such payment which is made does not reflect the fair value of assets. The difference between the market value of the assets acquired and any compensation provided is recorded as an uncompensated seizure in the other changes in the volume of assets account.

Transactions with the central bank

20.217 Two types of payments by the central bank to the government are observed in practice:

(a) payments made on a regular basis, usually in the form of dividends, based on the current activity of the central bank (like managing foreign exchange reserves). These payments are recorded as dividends as long as they are not higher than a measure of net operating income, consisting of net property income, net of costs and of any transfers. Amounts in excess of this sum are to be recorded as a decrease in equity;

(b) exceptional payments following the sale or the revaluation of reserve assets. These payments are recorded as a withdrawal of equity. The rationale is that the value of such assets affects the value of the equity liability of the central bank and the equity assets of government. Thus, holding gains on the reserve assets of the central bank have a counterpart in the equity assets of government via the equity liability of the central bank.

Payments from central government to the central bank are to be recorded in a similar way as for other public corporations. In particular, large payments are subject to the 'capital injection test' to determine the character of the payments.

Restructures, mergers, and reclassifications

20.218 When a public corporation is restructured, financial assets and liabilities may appear or disappear reflecting new financial relationships. These changes are recorded as changes in sector classification and structure in the other changes in the volume of assets account. An example of such a restructuring is when a corporation is split into two or more institutional units and new financial assets and liabilities are created.

20.219 The purchase of shares and other equity of a corporation as part of a merger, on the other hand, is to be recorded as a financial transaction between the purchasing corporation and the previous owner.

20.220 Any change in the classification of assets and liabilities not related to restructuring or changes in sector classification, such as the monetisation or demonetisation of gold, is recorded as a change in the classification of assets or liabilities in the other changes in the volume of assets account.

Debt operations

20.221 Debt operations can be particularly important for the general government sector, as they often serve as a means for government to provide economic aid to other units. The recording of these operations is covered in Chapter 5. The general principle for any cancellation or assumption of debt of a unit by another unit, by mutual agreement, is to recognise that there is a voluntary transfer of wealth between the two units. This means that the counterpart transaction of the liability assumed or of the claim cancelled is a capital transfer. No flow of money is usually observed, this may be characterised as a capital transfer in kind.

Debt assumptions, debt cancellation and debt write-offs

Debt assumption and cancellation

20.222 Debt assumption occurs when a unit assumes responsibility for another unit's outstanding liability towards a creditor. This happens frequently when a government guarantees a debt of another unit and the guarantee is called or activated.

20.223 When a government assumes a debt, the counterpart transaction of the new government liability is a capital transfer in favour of the defaulting debtor. The case where a financial asset is recorded as a counterpart is to be examined carefully. There are two different contexts.

(a) An actual pre-existing financial asset is acquired against a third party, as in the case of guaranteed export insurance. Thus, government records, as the counterpart transaction of its new liability, the acquisition of a financial asset equal to the present value of the amount expected to be received. If this amount is equal to the liability assumed, no further entries are required. If the amount expected to be recovered is less than the liability assumed, the government records a capital transfer for the difference between the liability incurred and the value of the asset acquired.

(b) Government simply records a claim against the benefiting corporation, which is in most cases a public corporation in difficulty. In general, because of the very hypothetical value of this claim, no such claim is recorded. Possible future repayments by the beneficiary will be recorded as revenue by the government.

20.224 Debt payments on behalf of others are similar to debt assumptions, but the unit making the payments does not assume the entire debt. The transactions recorded are similar.

20.225 Debt cancellation (or debt forgiveness) is the extinction or reduction of a claim by agreement between the creditor and the debtor. The creditor records a capital transfer payable for the amount cancelled and the other unit records a capital transfer receivable. Mutual agreement is often presumed though not formally established in case of government forfeiting claims, such as in the case of student loans and lending to farmers.

20.226 Debt assumptions and debt cancellations which benefit a controlled entity result in an increase in the value of the equity in the unit being invested in, that is reflected in the revaluation accounts. If a government has its debt assumed by another government, then it records a capital transfer revenue, a new debt to the assuming government unit, or both.

20.227 Debt assumptions and debt cancellations carried out in the context of privatisation are recorded as transactions in equity, for the amount not in excess of privatisation proceeds, the remainder being a capital transfer, in order to ensure the accounting neutrality of the way in which privatisation is conducted. Privatisation must be carried out within one year.

20.228 When debtor governments offer to repay the debt in anticipation, at a value below the principal value which includes interest in arrears, the event leads to an entry in the capital account with an impact on the government net lending/net borrowing, as a grant by the creditor is presumed. When early redemption leads to the payment of a penalty or fee to the lender as foreseen in the contract, the amount shall be recorded as income of the lender. In the case of securities, a buyback on the market leads to an entry in the revaluation accounts, unless the early redemption is imposed on the securities holder.

20.229 The difference in value in case of sale to a third party of government claims against other governments leads to a capital transfer entry in the capital accounts, with an impact on the government deficit, because the nature of the claim implies an original intention to convey a benefit, and the sale is a way to conduct debt restructuring.

20.230 As a result, the capital transfer expenditure of government is revenue of the debtor, in recognition of the fact that it is the genuine beneficiary of the transaction, with an entry in the rest of the world account matching the creditor government expenditure. For the seller, the transaction value of the claim disposed off is the principal value. The value of the claim enters both the new creditor's and debtor's accounts, i.e. respectively, the bank balance sheet and the ROW accounts — for the international investment position, at its reduced value.

20.231 In rarer cases, when the discount negotiated with the third party or with a debtor offering the repurchase of its debt only reflects changes in market interest rates, and not a change in credit worthiness, the government creditor can be presumed to be acting as a normal investor. The difference, net of any penalty or fee, is entered in the revaluation accounts. One test is whether the amount repaid could have exceeded the principal value.

Debt assumption involving a transfer of non-financial assets

20.232 If a government wants to ease the debt burden of a public corporation, it may also, in addition to the debt assumed by a government unit, take over non-financial assets such as public transport infrastructure. This debt assumption involving a transfer of non-financial assets to the government unit is deemed to be made by mutual agreement, and has exactly the same impact as a debt assumption on the government net lending/net borrowing: the amount of the capital transfer to be recorded in favour of the corporation is equal to the amount of the debt assumed. An acquisition of non-financial assets has a negative effect on net lending (+)/net borrowing (–).

Debt write-offs or write-downs

20.233 Debt write-offs are the reduction by a creditor in the balance sheet of the amount owed to it, usually when a creditor concludes that a debt obligation has little or no value, because the debt is not going to be paid; the debtor is bankrupt, has disappeared or cannot be realistically pursued for recoveries that would justify the various costs incurred. Debt write-downs refer to the reduction by a creditor in the carrying value of an asset in its balance sheet.

20.234 Write-downs and write-offs are internal accounting actions by the creditor and are often not recognised as transactions, because they are not carried out by mutual agreement. However, it happens that write-downs and write-off do not amount to the annulment of the claim over the debtor and consequently there may commonly be reversals of write-downs, and less frequently write-offs.

20.235 Debt write-downs do not lead as such to entries in the balance sheet of the creditor because the carrying value of the debt already reflects the market value of the instrument or is at nominal value in the case of loans, unless the market value is proxied by the written down book value (in the case where the write down enters the revaluation accounts). In contrast, debt write-offs lead to the removal of the asset from the creditor balance sheet by way of an other change in the volume for the amount exiting — the principal value for loan, a market value for securities, unless the write-off reflects a debt cancellation event. Thus, differently from debt assumption or debt cancellation, debt write-offs and write-downs have no effect on net lending/borrowing of government.

Other debt restructuring

20.236 Debt restructuring is an agreement to alter the terms and conditions for servicing an existing debt, usually on more favourable terms for the debtor. The debt instrument that is being restructured is considered to be extinguished and replaced by a new debt instrument with the new terms and conditions. If there is a difference in value between the extinguished debt instrument and the new debt instrument, it is a type of debt cancellation and a capital transfer is necessary to account for the difference.

20.237 A debt-for-equity swap occurs when a creditor agrees to replace a debt owed to it by an equity security. For example, government may agree with a public enterprise owned by it to accept an increase in the government's equity stake in the public enterprises in place of an existing loan. In such circumstance, the event should be subject to the capital injection test. Any difference in the value of the debt instrument being extinguished and the equity recognised is a capital transfer with an entry recorded in the revaluation accounts.

20.238 Debt arrears occur when a debtor misses an interest or principal payment. The debt instrument will not normally change, but knowing the amount of debts in arrears can provide important information.

Purchase of debt above the market value

20.239 The acquisition of debt for a value above the market value, at inception is called concessional loans, and later on debt defeasance. Both intend to convey a benefit and so the recording of expenditure such as a capital transfer is required.

20.240 Debt defeasance occurs when a debtor matches debt instruments with financial assets having the same or greater debt service inflows. Even when the defeased instruments have been transferred to a separate entity, the gross position should still be recorded by treating the new entity as an ancillary unit and consolidating it with the defeasing unit. If the ancillary unit is non-resident, it is treated as a special purpose entity and the transactions of government with this unit should be treated as described in section 'The government finance presentation of statistics'.

20.241 Debt issued on concessional terms. There is no precise definition of concessional loans, but it is generally accepted that they occur when units of the general government sector lend to other units in such a way that the contractual interest rate is intentionally set below the market interest rate that otherwise would apply. The degree of concessionality can be enhanced with grace periods, frequencies of payments, and a maturity period favourable to the debtor. Since the terms of a concessional loan are more favourable to the debtor than market conditions would otherwise permit, concessional loans effectively include a transfer from the creditor to the debtor.

20.242 Concessional loans are recorded at their nominal value just as other loans, but a capital transfer is recorded as a memorandum item at the point of loan origination equal to the difference between the contract value of the debt and its present value using a relevant market discount rate. There is no single market interest rate that should be used to measure the capital transfer. The commercial interest reference rate published by the OECD may be applicable when the loan is issued by one of its member countries.

Defeasances and bailouts

20.243 A bailout is a term meaning a rescue from financial distress. It is often used when a government unit provides short-term financial assistance to a corporation to help it survive a period of financial difficulty or a more permanent injection of financial resources to help recapitalise the corporation. Bailouts of financial institutions are often referred to as financial defeasance. Bailouts are likely to involve highly publicised one-time transactions with large values and, therefore, to be easy to identify.

20.244 Intervention of general government can take various forms. Examples are the following:

(a) a government may guarantee certain liabilities of the enterprise to be assisted;

(b) a government may provide equity financing on exceptionally favourable terms;

(c) a government may purchase assets from the enterprise to be assisted for prices greater than their true market value;

(d) a government may create a special purpose entity or other type of public body to finance and/or to manage the sales of assets or liabilities of the enterprise to be assisted.

20.245 Government guarantees during a bailout are treated as one-off guarantees to entities in financial distress. An example is where the entity is not able or has substantial difficulties to meet its obligations since its cash generating abilities are limited or the tradability of its assets is severely limited due to exceptional events. This will normally lead to recording a capital transfer at inception, as if the guarantee were called, for the entirety of the granted guarantee or, in case a reliable estimation is available, for the amount of the expected call, which is the expected loss of government. See also paragraph 20.256.

20.246 If the government buys assets from the enterprise to be assisted, the amount paid will normally be more than the true market price of the assets. The purchase is recorded at the actual market price and a capital transfer recorded for the difference between the market price and the total amount paid.

20.247 During a bailout, governments often buy loans from financial institutions for their nominal value rather than their market value. Even though loans are recorded at nominal prices, the transaction is partitioned by recording a capital transfer and an entry in the revaluation accounts. If there is reliable information that some loans are irrecoverable, fully or for nearly their total amount, or if there is no reliable information on the expected loss, these loans are accounted for at zero value and a capital transfer is recorded for their former nominal value.

20.248 If a public institutional unit is created by government with its only task being to assume management of the bailout, the unit should be classified in the general government sector. If the new unit is intended to be an on-going concern with the bailout a temporary task, its classification as a government unit or a public corporation is made following the general rules as described in the section on restructuring agencies above. Units that purchase financial assets from distressed financial corporations with the objective of selling them in an orderly manner cannot be considered financial intermediaries because they do not place themselves at risk. They are classified in the general government sector.

Debt guarantees

20.249 A debt guarantee is an arrangement in which a guarantor agrees to pay a creditor if a debtor defaults. For general government, giving a guarantee is a way to support economic activities without a need for an immediate cash outlay. Guarantees have a significant impact on the behaviour of economic agents by modifying the lending and borrowing conditions on financial markets.

20.250 For each guarantee, there are three parties involved: the lender, the borrower, and the guarantor. Originally, stocks and flows of the credit relationship are recorded between the lender and the borrower, while after the call stocks and flows related to the guarantee relationship are recorded between the lender and the guarantor. Thus, the activation of guarantees involves the recording of flows and changes in the balance sheets of the debtor, the creditor, and the guarantor.

20.251 There are three main types of guarantee:

(i) guarantees that meet the definition of a financial derivative;

(ii) standardised guarantees; and

(iii) one-off guarantees.

Derivatives-type guarantees

20.252 Guarantees that meet the definition of financial derivatives are those that are actively traded on financial markets, such as credit default swaps. The derivative is based on the risk of default of a reference instrument and generally not actually linked to an individual loan or bond.

20.253 When such a guarantee is initiated, the purchaser makes a payment to the financial institution creating the derivative. This is recorded as a transaction in financial derivatives. Changes to the value of the derivative are recorded as revaluations. If the reference instrument defaults, the guarantor pays the purchaser for its theoretical loss on the reference bond. This is also recorded as a transaction in financial derivatives.

Standardised guarantees

20.254 Standardised guarantees cover similar types of credit risk for a large number of cases. It is not possible to estimate precisely the risk of any one loan being in default, but it is possible to estimate how many, out of a large number of such loans, will default. The treatment of standardised guarantees is explained in Chapter 5.

One-off guarantees

20.255 One-off guarantees exist where the conditions of the loan or the security are so particular that it is not possible for the degree of risk associated with the loan to be calculated with any degree of accuracy. In general, the granting of a one-off guarantee is considered a contingency and is not recorded as a financial asset/liability in the balance sheet of the guarantor.

20.256 In exceptional cases, one-off guarantees granted by governments to corporations in certain well-defined financially distressed situations (for example where the corporation has negative own funds), implying a very high likelihood to be called, are treated as if such guarantees were called at inception (see also paragraph 20.245).

20.257 The activation of a one-off guarantee is treated in the same way as a debt assumption. The original debt is liquidated and a new debt is created between the guarantor and the creditor. The debt assumption implies the recording of a capital transfer in favour of the defaulting debtor. The capital transfer is offset by a financial transaction, the financial liability transferred from the corporation to government.

20.258 The activation of a guarantee may or may not require repayment of debt at once. The accrual principle for time of recording suggests that the total amount of debt assumed should be recorded at the time the guarantee is activated and the debt assumed. The guarantor is the new debtor, and principal repayments by the guarantor and interest accruals on the assumed debt should be recorded when these flows occur. Thus, when calls on guarantees solely involve the settlement of the debt service due on the debt during the accounting period, as in the case of cash calls, a capital transfer is recorded for the amounts settled. However when a pattern of partial calls are observed such as three times in succession, and is expected to continue, a debt assumption is recorded.

20.259 When the original debtor refunds the guarantor while an expenditure has been recorded on past guarantee calls, revenue is recorded by the guarantor. However this revenue should be tested for the super-dividend test when the debtor is controlled by the guarantor; any excess of the refund over the entrepreneurial income is recorded as withdrawal of equity.

Securitisation

Definition

20.260 Securitisation consists of issuing securities on the basis of cash flows that are expected to be generated by assets, or other income streams. Securities depending on cash flows from assets are called 'asset backed securities' (ABS).

20.261 In securitisation, the originator conveys ownership rights over assets, or the right to receive specific future flows, to a securitisation unit, which in return pays an amount to the originator from its own source of financing. Such a securitisation unit is often known as a special purpose entity. The securitisation unit obtains its own financing by issuing securities using the assets or rights to future flows transferred by the originator, as collateral. The key question in recording the payment by the securitisation unit to the originator is whether the transfer of the asset is a sale of an existing asset to the securitisation unit, or a means of borrowing using future flows of revenues as collateral.

Criteria for sale recognition

20.262 In order for the securitisation to be treated as a sale, a marketable asset must exist in the balance sheet of government and there must be a full change of ownership to the securitisation unit as evidenced by the transfer of the risks and rewards linked to the asset.

20.263 Thus, securitisation of future revenue flows not recognised as a return on economic assets, such as future oil royalties, is borrowing by the originator.

20.264 When a securitisation involves flows associated to a financial or a non-financial asset, the risks and rewards associated with owning the assets must be transferred for a sale to be recorded.

20.265 If government retains a beneficial interest in the securitisation, by way of retaining a deferred purchase price, which is the right to excess flows above the original securitisation value, or the right to own the last tranche issued by the securitisation unit, or by other means, no sale has occurred, and the event is originator's borrowing.

20.266 If government, as originator, guarantees repayment of any debt incurred by the securitisation unit related to the asset, risks associated with the asset have not been transferred. No sale has occurred and the event is originator's borrowing. Guarantees can take various forms such as insurance contracts, derivatives, or clauses of substitution of assets.

20.267 If it is determined that the securitisation contract involves the true sale of a marketable asset, the sector classification of the securitisation unit must be examined. Criteria are set in the section 'Defining the general government sector' for establishing if the securitisation unit is an institutional unit and if it has a financial intermediation function. If the securitisation unit is classified to the government sector, the securitisation is government borrowing. If the securitisation unit is classified as other financial intermediary (S.125), then the securitisation will be reported as a sale of assets, with no direct impact on government debt, and with an impact on government deficit if the flows are securitised on a non-financial asset.

20.268 If government provides compensation, in the form of cash after the event, or other means such as guarantees, thus removing the transfer of risks, a securitisation originally viewed as a sale is from that moment classed as borrowing, with the following transactions: incurrence of a liability and acquisition of assets with a capital transfer expenditure in the event that the value of the liability exceeds that of the asset.

Recording of flows

20.269 When a securitisation operation is recorded as borrowing, the cash flows passed on to the securitisation unit are first recorded in the accounts of government and simultaneously as repayment of debt, both interest and principal.

20.270 When cash flows extinguish prior amortisation of the debt incurred, the remainder liability is removed from the government balance sheet by another change in volume.

20.271 After complete extinction of a debt incurred, any remaining cash flows passed over to the securitisation unit in accordance with the securitisation contract are recorded as originator's expenditure.

Other issues

Pension obligations

20.272 The treatment of pension schemes is described in Chapter 17, including a supplementary table to the core national accounts of the ESA, where all obligations of pension schemes are to be accounted for, including pension obligations arising from social security schemes. The pension entitlements of government sponsored unfunded employment-related defined benefit schemes are to be recorded only in those supplementary accounts.

Lump sum payments

20.273 On occasion, units may pay a lump sum to government in exchange for taking over some of their pension obligations. Such large one-off transactions occur between a government and another unit, usually a public corporation, often linked to the change of status of the corporation, or to its privatisation. The government usually assumes the obligations in question in exchange for a cash payment covering the expected deficit resulting from the transfer.

20.274 In concept, being an equal exchange of cash for the incurrence of an obligation that is a liability, the transaction should not affect measures of net worth and financial net worth, and should not alter government net lending/net borrowing. However, the pension obligation may not appear as a liability on the balance sheet of either of the units transferring and assuming the obligations. For example, when transferred to the government, the pension obligations may be merged with a social security scheme for which no liability is recognised.

20.275 In this context, such a lump sum payment should be viewed as a prepayment of social contributions. In consideration of the various arrangements observed in practice and in order to avoid any distortion in the calculation of some aggregates such as labour costs and compulsory levies, the lump sum is recorded as a financial advance (F.8), a prepayment of miscellaneous current transfers (D.75) which will be recorded in the future in proportion to the related payments of pensions. As a result, the lump sum payment has no impact on the net lending/net borrowing of the general government in the year of transfer of obligations.

Public-private partnerships

Scope of PPP

20.276 Public-private partnerships (PPPs) are complex, long-term contracts between two units, one of which is normally a corporation (or a group of corporations, private or public) called the operator or partner, and the other normally a government unit called the grantor. PPPs involve a significant capital expenditure to create or renovate fixed assets by the corporation, which then operates and manages the assets to produce and deliver services either to the government unit or to the general public on behalf of the public unit.

20.277 At the end of the contract, the grantor usually acquires legal ownership of the fixed assets. The fixed assets are in most cases characteristic of some core public service such as schools or universities, hospitals, and prisons. They also may be infrastructure assets because many of the large projects undertaken by means of PPPs involve the provision of transportation, communications, utilities, or other services typically described as infrastructure services.

20.278 A general description that includes the most common accounting problems is as follows: a corporation agrees to acquire a complex of fixed assets and then to use those assets together with other production inputs to produce services. Those services may be delivered to government, either for use as an input to its own production such as in motor vehicle maintenance services, or for distribution to the public without payment such as education services, in which case government makes periodic payments during the contract period and the corporation expects to recover its costs and earn an adequate rate of return on its investment from those payments.

20.279 PPP contracts under this definition involve the grantor paying the operator 'availability' or 'demand' fees, and as such constitute a procurement arrangement. In contrast to other long-term service contracts, a dedicated asset is created. Thus, a PPP contract implies the government purchase of a service produced by a partner through the creation of an asset. There can be many variations in PPP contracts regarding the disposition of the assets at the end of the contract, the required operation and maintenance of the assets during the contract, the price, quality, and volume of services produced, and so forth.

20.280 When the corporation sells the services directly to the public through for example a toll road, the contract is seen as a concession rather than a PPP. The price is routinely regulated by the government and set at a level that the corporation expects will permit it to recover its costs and earn an adequate rate of return on its investment. At the end of the contract period, the government may gain legal ownership and operational control of the assets, possibly without payment.

20.281 In PPP contract, the corporation acquires the fixed assets and is the legal owner of the assets during the contract period, in some cases with the backing of the government. The contract often requires that the assets meet the design, quality, and capacity specified by government, be used in the manner specified by government to produce the services required by the contract, and be maintained in accordance with standards defined by government.

20.282 Furthermore, the assets typically have service lives much longer than the contract period so that government may control the assets, bear the risks and receive the rewards, for a major portion of the assets' service lives. Thus, it is frequently difficult to determine whether it is the corporation or the government that bears the majority of the risks and reaps the majority of the rewards.

Economic ownership and allocation of the asset

20.283 As with leases, the economic owner of the assets in a PPP is determined by assessing which unit bears the majority of the risks and which unit is expected to receive a majority of the rewards of the assets. The asset will be allocated to this unit, and consequently the gross fixed capital formation. The main risk and reward elements to be assessed are:

(a) construction risk, which includes costs overruns, the possibility of additional costs resulting from late delivery, not meeting specifications or building codes, and environmental and other risks requiring payments to third parties;

(b) availability risk, which includes the possibility of additional costs such as maintenance and financing, and the incurrence of penalties because the volume or quality of the services do not meet the standards specified in the contract;

(c) demand risk, which includes the possibility that demand for the services is higher or lower than expected;

(d) residual value and obsolescence risk, which include the risk that the asset will be less than its expected value at the end of the contract and the degree to which the government has an option to acquire the assets;

(e) the existence of grantor financing or granting guarantees, or of advantageous termination clauses notably on termination events at the initiative of the operator.

20.284 The risks and rewards are with the operator if the construction risk and either the demand or the availability risks have been effectively transferred. Majority financing, guarantees covering a majority of financed levied, or termination clauses providing for a majority reimbursement of finance provider on termination events at the initiative of the operator lead to the absence of effective transfer of either of these risks.

20.285 In addition, owing to the specificity of PPP contracts, which involve complex assets, and when the assessment of risks and rewards is not conclusive, a relevant question is which unit has a decisive influence on the nature of the asset and how the terms and conditions of the services produced with the asset are determined, notably:

(a) the degree to which the government determines the design, quality, size, and maintenance of the assets;

(b) the degree to which the government is able to determine the services produced, the units to which the services are provided, and the prices of the services produced.

20.286 The provisions of each PPP contract shall be evaluated in order to decide which unit is the economic owner. Due to the complexity and variety of PPPs, all of the facts and circumstances of each contract should be considered, and then the accounting treatment, that best reflects the underlying economic relationships, selected.

Accounting issues

20.287 If the corporation is assessed as being the economic owner and if — as is commonly the case — the government obtains legal and economic ownership at the end of the contract without an explicit payment, a transaction is recorded for the government's acquisition of the assets. One general approach is for the government gradually to build up a financial claim and the corporation gradually to accrue a corresponding liability such that the value of both will equal the expected residual value of the assets at the end of the contract period. Implementing this approach requires existing monetary transactions to be rearranged or new transactions to be constructed using assumptions about expected asset values and interest rates. This implies partitioning the PPP payments, when the PPP asset is off government balance sheet, in a component representing the acquisition of a financial asset.

20.288 An alternative approach is to record the change of legal and economic ownership at the end as a capital transfer in kind. The capital transfer approach does not reflect the underlying economic reality as well, but data limitations, uncertainty about the expected residual value of the assets, and contract provisions allowing various options to be exercised by either party make using a capital transfer approach the most prudent.

20.289 Another significant problem arises when government is assessed as being the economic owner of the assets but does not make any explicit payment at the beginning of the contract. A transaction must be constructed to accomplish the acquisition. The most common suggestion is that the acquisition be made with an imputed financial lease because of the similarity with actual financial leases. The implementation of that choice, however, depends on the specific contract provisions, how they are interpreted, and possibly other factors. For example, a loan could be imputed and actual government payments to the corporation, if they exist, could be rearranged so that a portion of each payment represents repayment of the loan. If there are no actual government payments, then non-monetary transactions could be constructed for the loan payments. Other means of payment by government for the asset could be an operating lease prepayment if an operating lease is imputed or an intangible asset for the right of the corporation to access the assets for the production of services.

20.290 Another important problem concerns the measurement of production. Whatever decisions are made about which unit is the economic owner of the assets during the contract period and how the government eventually acquires them, care should be taken that production is correctly measured. Again, there are options and their desirability varies with the exact situation and the availability of data. The difficulty arises when the government is assessed as being the economic owner of the assets but the assets are used by the corporation to produce services. It is desirable to show the value of the capital services as a cost of production of the corporation, but that may require the imputation of an operating lease, which in turn may require a rearrangement of actual transactions or a construction of non-monetary transactions to identify the lease payments. An alternative is to show the cost of capital services in the production account of the general government sector but to classify the output of the government in the same way as the classification of the output of the corporation so that the total output in the economy is correctly classified.

Transactions with international and supranational organisations

20.291 Transactions that occur between resident units and international or supranational organisations are classified to the rest of the world sector.

20.292 An example of such transactions is between non-government residents and institutions of the European Union, where these are considered as the principal parties to the transaction even though government units play a role as an intermediary agent in channelling the funds. The recording of the main transactions is directly between the two parties and does not impact on the government sector. The government's role is recorded as a financial transaction (F.89).

20.293 The recording of specific transactions between national residents and institutions of the European Union are set out below for various categories:

(a) taxes: some taxes on products, such as import duties and excises, are payable to institutions of the European Union or other supranational organisations. These form three categories:

(1) those payable directly, such as, in the past, the European Coal and Steel Community levy on mining and iron and steel producing entities, which are recorded directly;

(2) those collectible by national governments as agents on behalf of the institutions of the European Union or other supranational organisations, but where the tax is judged as payable directly by the resident producers. Examples are levies on imported agricultural products, monetary compensatory amounts levied on imports and exports, sugar production levies and the tax on isoglucose, co-responsibility taxes on milk and cereals, and custom duties levied on the basis of the integrated tariff of the European Communities. Such items are recorded directly from the producers to the supranational organisation, with government's role as an intermediary recorded as a financial transaction;

(3) receivables of value added tax in each Member State. They are recorded as receivable by national governments, with the amounts that Member States provide to the European Union recorded as a current transfer (D.76). The time of recording of the transfer from government is when it is to be paid;

(b) subsidies: any subsidies directly payable by supranational organisations to resident producers are recorded as directly payable by the supranational organisation rather than a resident government unit. Subsidies payable to resident producers and channelled through government units as intermediaries are similarly recorded directly between the principal parties, but also create entries in other accounts receivable/payable (F.89) in the government financial accounts;

(c) miscellaneous current transfers: contributions to the European Union budget from Member States for the third and fourth types of payment designed to give the European Union its own resources. The third resource is calculated by applying a flat rate to the Value Added Tax base of each Member State. The fourth resource is based on the gross national income of each Member State. Such payments are considered to be compulsory transfers from governments to the European Union. They are classified as miscellaneous current transfers and recorded when they are to be paid;

(d) current international cooperation: most other current transfers, in cash or in kind, between government and non-resident units, including international organisations, are classified as current international cooperation. This includes current aid to developing countries, wages payable to teachers, advisers and other government agents in activity abroad etc. One characteristic of current international cooperation is that it consists of transfers made on a voluntary basis;

(e) capital transfers: investment grants, in cash or in kind, and other capital transfers, especially as the counterpart transaction of debt cancellation or debt assumption, can be payable to or receivable from an international or supranational organisation;

(f) financial transactions: some financial transactions, usually loans, may be recorded when granted by international organisations such as the World Bank and International Monetary Fund. Government investments in the capital of international and supranational organisations apart from the International Monetary Fund are classified as other equity (F.519), unless there is no possibility of repayment in which case they are classified as current international cooperation.

20.294 The institutions of the European Union make significant current and capital transfers through structural funds such as the European Social Fund, the European Regional Development Fund and the Cohesion Fund. The final beneficiaries of such transfers can be government or non-government units.

20.295 Grants paid from structural funds often involve co-financing, whereby the European-Union jointly funds an investment made by government. There can be a mixture of pre-payments, interim and final payments, which may be channelled through at least one government unit. Resident government units may also make advances payments of the receipts expected from the European Union.

20.296 When non-government units are the beneficiaries, any payments made by government in advance of European Union cash receipts are recorded as financial transactions in other accounts receivable/payable. The counterpart of the financial transaction is the European Union if the accrual point of the non-financial transaction has occurred, otherwise it is the beneficiary. The accounts receivable/payable positions unwind when the cash is paid.

20.297 The recording time of co-financed government expenditure transfers is the time when European Union authorisation is given.

20.298 There may be circumstances where government advances exceed the amount allowable once this is determined by the authorisation process. If the beneficiary is in a position to repay the excess this unwinds the other accounts payable it has with government. If the beneficiary cannot repay, then a capital transfer from government is recorded cancelling the other accounts payable.

20.299 When government units are the beneficiaries, the government revenue is moved forward to match the time of expenditure in a departure from the general rules on time of recording for such transfers. If there is a considerable time lag between the government expenditure taking place and cash being received, then the revenue can be recorded when the claim to the European Union is submitted; this is applicable only when: reliable information on the time of the expenditure is not available; or amounts are big; or the time lag between the expenditure and submission of claim is small.

20.300 All advance payments from the European Union to government units as final beneficiaries at the inception of multi-year programmes are recorded as financial advances.

Development assistance

20.301 Governments provide assistance to other countries by lending funds at an interest rate that is intentionally less than the market interest rate for a loan with comparable risk (concessional loans as described in the section 'Accounting issues relating to general government', 'Dept operations'), or grants in cash and in kind.

20.302 Recording the international assistance through grants in kind, such as deliveries of food stocks, often creates difficulty. The prices of the goods or services being delivered in kind, such as the food stocks, in the receiving country might be quite different from the prices in the donor country. As a general principle, the value of the donation to the recipient should be regarded as equal to the cost of providing the assistance to the recipient. It follows that the prices of the donor country should be used as a basis for the calculation of the value of the donation. In addition to the goods or services themselves, all supplemental costs identifiable with the delivery of the goods or services should be included, such as transportation to the foreign country, delivery within that country, the compensation of government employees of the donating country to prepare the shipments or oversee their delivery, insurance, and so forth.

The public sector

20.303 The public sector consists of general government and public corporations. The elements composing the public sector are already present in the main sector structure of the system and can be rearranged to compile the public sector accounts. This is undertaken by putting together the subsectors of the general government sector and the public subsectors of non-financial and financial corporations.

<table>
<tr><th>Non-financial corporations</th><th>Financial corporations</th><th>General government</th><th>NPISHs</th><th>Households</th></tr>
<tr><td>Public</td><td>Public</td><td rowspan="2">Public</td><td rowspan="2">Private</td><td rowspan="2">Private</td></tr>
<tr><td>Private</td><td>Private</td></tr>
</table>

20.304 Public financial corporations can be further divided into the central bank, and other public financial corporations, which can be further subdivided into subsectors of financial corporations as appropriate.

Table 20.2 — The public sector and its subsectors

<table>
<tr><th colspan="4">General government</th><th colspan="3">Public corporations</th></tr>
<tr><td rowspan="2">Central government</td><td rowspan="2">State government</td><td rowspan="2">Local government</td><td rowspan="2">Social security</td><td rowspan="2">Public non-financial corporations</td><td colspan="2">Public financial corporations</td></tr>
<tr><td>Central bank</td><td>Other public financial corporations</td></tr>
</table>

20.305 Public sector accounts may be constructed according to the ESA framework and sequence of accounts, and in principle both consolidated and unconsolidated versions are analytically useful. Alternative presentations, such as the consolidated and unconsolidated equivalents of the Government Finance Statistics presentation described earlier in this Chapter, are also useful.

20.306 All institutional units included in the public sector are resident units controlled by government, either directly or indirectly by public sector units in aggregate. The control over an entity is defined as the ability to determine the general policy of that entity. This is described in more detail below.

20.307 The distinction between a public sector unit being part of general government or a public corporation is determined by the market/non-market test, as described in Chapter 3 and above. Non-market public sector units are classified in general government and market public sector units are classified as public corporations. The only exception to this general rule is for certain financial institutions that either supervise or serve the financial sector, which are classified as public financial corporations irrespective of whether they are market or non-market.

20.308 The legal form of a body is not a guide to its sector classification. For example, some legally constituted public sector corporations may be non-market units and hence classified to general government rather than as public corporations.

Public sector control

20.309 Control of a resident public sector unit is defined as the ability to determine the general policy of the unit. This can be through the direct rights of a single public sector unit or the collective rights of many. The following indicators of control are to be considered:

(a) rights to appoint, veto or remove a majority of officers, board of directors etc. The rights to appoint, remove, approve or veto a majority of the governing board of an entity are sufficient to determine control. Such rights may be directly held by one public sector unit, or indirectly by public sector units in aggregate. If the first set of appointments are controlled by the public sector but subsequent replacements are not subject to these controls, then the entity remains in the public sector until the time when the majority of the directors are not controlled appointments;

(b) rights to appoint, veto or remove key personnel. If the control of general policy is effectively determined by influential members of the board, such as the chief executive, chairperson and finance director, then the powers to appoint, veto or remove those personnel are given greater prominence;

(c) rights to appoint, veto or remove a majority of appointments for key committees of the entity. If key factors of the general policy, such as remuneration of senior staff, pay and business strategy, are delegated to subcommittees, then the rights to appoint, remove or veto of directors on these subcommittees is a determinant of control;

(d) ownership of the majority of the voting interest. This will normally determine control when decisions are made on a one-share, one-vote basis. The shares may be held directly or indirectly, with shares owned by all public sector units aggregated. If decisions are not made on a one-share, one-vote basis the situation should be analysed to see if the public sector has a majority vote;

(e) rights under special shares and options. These golden or special shares were once common in privatised corporations and also feature in some special purpose entities. In some cases they give public sector entities some residual rights to protect interests; such rights may be permanent or time-limited. The existence of such shares is not by itself an indicator of control, but needs to be carefully analysed, in particular the circumstances where the powers may be invoked. If the powers influence the current general policy of the entity they will be important to the classification decisions. In other cases they will be reserve powers that may confer rights to control general policy in times of emergency etc, these are judged as irrelevant if they do not influence existing policy, although in the event that they are utilised they will usually trigger immediate reclassification. The existence of a share purchase option to public sector entities in certain circumstances is a similar situation, and a judgement is necessary on whether the powers to implement the option influence the general policy of the entity;

(f) rights to control via contractual agreements. If all the sales of an entity are to a single public sector entity, or a collection of public sector entities, there is scope for dominant influence that can be judged as control. The presence of other customers, or the potential to have other customers, is an indicator that the entity is not controlled by public sector units. If the entity is restricted from dealing with non-public sector customers due to public sector influence, then this is an indicator of public sector control;

(g) rights to control from agreements/permission to borrow. Lenders often impose controls as conditions of making loans. If the public sector imposes controls through lending, or to protect its risk exposure from a guarantee, which are tougher than a private sector entity would typically face from a bank, this is an indicator of control. If an entity requires permission from the public sector to borrow, then this is an indicator of control;

(h) control via excessive regulation. When regulation is so tight that it effectively dictates the general policy of the business, it is a form of control. Public authorities can in some cases have powerful regulatory involvement, particularly in areas such as monopolies and privatised utilities where there is a public service element. It is possible for regulatory involvement to exist in important areas, such as price setting, without an entity ceding control of general policy. Choosing to enter into or operate in a highly regulated environment is similarly an indicator the entity is not subject to control;

(i) others. Control may also be obtained from statutory powers or rights contained in an entity's constitution, for example to limit the activities, objectives and operating aspects, approve budgets or prevent the entity changing its constitution, dissolving itself, approving dividends, or terminating its relationship with the public sector. An entity that is fully, or close to fully, financed by the public sector is considered to be controlled if the controls on that funding stream are restrictive enough to dictate the general policy in that area.

20.310 Each classification case needs to be judged on its own merits and some of these indicators may not be relevant to the individual case. Some indicators, such as (a), (c) and (d) in paragraph 20.309, are sufficient by themselves to establish control. For others a number of separate indicators may collectively indicate control.

Central banks

20.311 Central banks are generally assumed to be public financial corporations, even in the case where other than government are their sole or majority legal owner. They are considered as public corporations through governments having economic ownership or exerting control by other means.

20.312 A central bank is a financial intermediary, whose activity is subject to specific legal provisions, and which is placed under general control of government, representing the national interest, even though the central bank enjoys a large degree of autonomy or independence with respect to exercising its main activity (notably the monetary policy). The key issue here is the recognition of the central bank's main function and activity — to manage the nation's reserve assets, to issue the national currency and to conduct the monetary policy — rather than its legal status. Government often has a formal right to liquidation proceeds.

20.313 Because of the existence of such beneficial interest or because of the government role, ownership of government over the central bank equity — or, at least, over the reserve assets managed by the central bank — is recognised in national accounts, as an economic ownership even in circumstances where it has no legal ownership.

Public quasi-corporations

20.314 Public quasi-corporations do not possess the legal characteristics of independent corporations but behave sufficiently differently from their owners, and more like entities in the non-financial or financial corporations sectors, to be recognised as institutional units.

20.315 The activities of the quasi-corporation must be ring-fenced, with sufficient information to allow a complete set of accounts to be compiled (see point (f) of paragraph 2.13), and be market units.

Special purpose entities and non-residents

20.316 Public sector entities may set up or use special purpose entities (SPEs) or special purpose vehicles. Such units often have no employees or non-financial assets and little physical presence beyond a 'brass plate' confirming their place of registration. They may be resident in a different territory.

20.317 SPE units set up by the public sector must be investigated to see if they have the power to act independently, are restricted in their activities, and carry the risks and rewards associated with the assets and liabilities they hold. If they do not meet such criteria they are not recognised as separate institutional units and, if resident, are consolidated into the public sector unit that created them. If non-resident they are recognised as part of the rest of the world and any transactions they undertake are re-routed via the public sector unit that created them.

20.318 Non-resident international joint ventures between governments, where neither party has control of the entity, are apportioned to governments as notional resident units.

Joint ventures

20.319 Public and private sector units can enter into a joint venture whereby an institutional unit is established. That unit may enter into contracts in its own name and raise finance for its own purposes. The unit is allocated to the public or private sectors depending on which party controls it.

20.320 In practice, in most joint ventures there is joint control. If the unit is classified as non-market it is by convention classified to general government since its behaviour is that of a government unit. If the unit is classified as a market producer and control is evenly divided, then the unit is partitioned into halves, one half allocated to the public sector and the other allocated to the private sector.

CHAPTER 21

Links between business accounts and national accounts and the measurement of corporate activity

21.01 Business accounts represent, alongside business surveys, a major source of information for corporate activity in national accounts. National accounting shares with business accounting a number of characteristics, the most noticeable of which are:

(a) the recording of transactions in accounts, i.e. in two-column tables;

(b) monetary valuation;

(c) use of balancing items;

(d) recording of transactions as they take place; and

(e) internal coherence of the system of accounts.

However, national accounting differs on a number of points, because it has a different objective: national accounting aims to describe within a coherent framework all the activities of a country and not just those of an enterprise or group of enterprises. This objective of a consistent picture across all entities in an economy and their relationship with the rest of the world brings constraints which do not affect business accounting.

21.02 National accounting has international standards shared across every country in the world. The development and application of business accounting differ amongst countries. However, business accounting is moving to applying shared international standards. Harmonisation at world level began on 29 June 1973 with the creation of the International Accounting Standards Committee (IASC) whose mission was to develop basic accounting standards referred to as IAS (International Accounting Standards) and then later as IFRS (International Financial Reporting Standards), that could be applied across the world. In the European Union, the consolidated accounts of EU listed companies are prepared according to the IFRS frame of reference from 2005 onwards.

21.03 Detailed guidelines on the contents of business accounts and how to link business accounts to national accounts belong in specialised manuals. This Chapter answers the most common questions raised when compiling national accounts on the basis of business accounts, and addresses specific issues of the measurement of corporate activity.

Some specific rules and methods of business accounting

21.04 In order to extract information from business accounts, national accountants should understand the international accounting standards for private corporations and for government bodies. The standards for private corporations are drawn up and maintained by the International Accounting Standards Board (IASB), and, for government bodies, by the International Public Sector Accounting Standards Board (IPSASB). The following paragraphs set out general principles of business accounting.

Time of recording

21.05 Business accounts record transactions when they take place, giving rise to claims and obligations, independently of the payment. This is recording on an accruals basis, as opposed to a cash basis. The national accounts are also drawn up on an accruals basis.

Double entry and quadruple entry accounting

21.06 In business accounts, each transaction of the enterprise is recorded in at least two different accounts, once on the debit side and once on the credit side for the same amount. This double entry system enables a check of the consistency of the accounts.

In national accounts, a quadruple entry system can also be used for most transactions. A transaction is reflected twice by each of the institutional units involved, for example once as a non-financial transaction in the production, income and capital accounts, and once as a financial transaction associated with the change in financial asset and liability.

Valuation

21.07 In business accounts and in national accounts, transactions are recorded at the price agreed upon by the transactors.

Assets and liabilities are generally valued at their original or historical cost in the financial statements of business entities, in possible combination with other prices, e.g. market prices for inventories. Financial instruments should be valued at fair value, which aim to reflect prices observed in markets by using specific valuation techniques if necessary.

In national accounts, assets and liabilities are recorded at current values at the time to which the balance sheet relates, not at their original valuation.

Income statement and balance sheet

21.08 For business accounts, two financial statements are prepared: the income statement and the balance sheet. The income statement groups together the transactions for income and costs, and the balance sheet stocks of assets and liabilities. These statements show the balances of the accounts, and transactions at an aggregate level. The statements are presented in the form of accounts. Both statements are closely linked to each other. The balance of the income statement is a profit or loss of the enterprise. This profit or loss is also included in the balance sheet.

21.09 The transaction accounts whose balance is included in the income statement are flow accounts. Their objective is to show the totals of income and expenditure during the financial year.

21.10 Balance sheets are stock accounts. They show the value of the assets and liabilities at the end of the financial year.

National accounts and business accounts: practical issues

21.11 In order that national accountants may use business accounts on a large scale, and not just in isolated cases, a number of conditions must be met.

The first is access to businesses' accounts. Usually, the publication of accounts is mandatory for large enterprises. Databases of such accounts are set up by private or public bodies, and it is important that national accountants are able to access these. For large enterprises, it is generally possible to obtain accounts directly from them.

The second condition is a minimum degree of standardisation of the accounting documents published by enterprises, since this is a necessary condition for computerised processing. A high level of standardisation is often associated with the existence of a body collecting accounts from enterprises in a standardised form. Collection may be organised on a voluntary basis, as in the case of the body running a financial statements centre which performs analyses for its members, or it may be made mandatory by law, as is the case where the collecting body is the tax authority. In both cases, national accountants are to request access to the databases, respecting the confidentiality policies that apply.

21.12 Business accounts can be used when the accounts are not compiled on a standardised basis. In many countries, sectors of the economy are dominated by a small number of large enterprises, and the accounts of those large enterprises can be used for the national accounts. Useful information can also be found in the notes to the accounts, such as more detail or guidance on how to interpret the entries in the accounts.

21.13 Business surveys are the other major source of data for the national accounts on corporate activities. Such surveys provide satisfactory results if the questions asked are compatible with entries and concepts of business accounts. An enterprise will not provide reliable information which is not based on its own internal information system. Business surveys are generally necessary, even in the best case where national accountants are able to access accounting databases, as the information contained in such databases is rarely detailed enough to meet all the needs of national accountants.

21.14 Globalisation complicates the use of business accounts in preparing national accounts. Business accounts must be drawn up on a national basis to be useful and this is not the case when enterprises have subsidiaries abroad. When the activity of the enterprise extends beyond the national territory, adjustments are necessary to create a national picture based on the enterprise's business accounts. Enterprises must provide to the business accounts database, either accounts on a national basis, or the adjustments to render the enterprise accounts on a national basis. When the accounts are collected from the enterprises by the tax authority, the tax authority generally requires that the data are provided on a national basis in order to be able to calculate the tax on profit, and this is the most favourable case for use in national accounts.

21.15 Another practical condition is that the financial year should correspond with the reference period of the national accounts. For annual accounts, this is generally the calendar year, and so it is desirable, in order to make best use of business accounts, that the majority of these enterprises start their financial year on 1 January. Enterprises can choose other financial year start dates. For operations corresponding to flows in the national accounts, it is often acceptable to recreate accounts on the basis of the calendar year by combining proportions of two successive financial years, but for balance sheets this method provides less satisfactory results, especially for items liable to rapid fluctuations during the year. Quarterly accounts are often compiled by large enterprises but they are rarely collected on a systematic basis.

The transition from business accounts to national accounts: the example of non-financial enterprises

21.16 The use of data from business accounts of non-financial enterprises for the preparation of national accounts requires several adjustments. These adjustments can be placed in three categories: conceptual adjustments, adjustments to enable consistency with the accounts of other sectors, and adjustments for exhaustiveness.

Conceptual adjustments

21.17 Conceptual adjustments are required because business accounts are not based on exactly the same concepts as national accounts and because where these concepts are close to each other, the valuation methods can be different. Examples of conceptual adjustments for the calculation of output are as follows:

(a) adjustment for the transition to the basic price. The turnover of enterprises is generally net of VAT but often includes taxes on products. Conversely, subsidies on products are rarely included in the turnover. It is therefore necessary to make an adjustment to the data from business accounts by deducting these taxes on products and adding these subsidies on products to arrive at an estimate of output at basic prices;

(b) insurance premiums. Insurance premiums paid by enterprises are part of their expenditure, but national accounts require that they be broken down into three elements: net premiums, the insurance service and premium supplements. Only the part corresponding to the service is intermediate consumption, and a correction is made by deducting net premiums and premium supplements from the gross payment.

Adjustments to achieve consistency with the accounts of other sectors

21.18 National accounts require that the accounts of enterprises are consistent with those of other enterprises and units in other institutional sectors.

So, taxes and subsidies valued on the basis of accounts of enterprises must be consistent with those received by or paid by general government. In practice, this is not observed and a rule is needed in order to achieve consistency. Normally information from general government is more reliable than that from enterprises, and the data from business accounts is adjusted.

Examples of adjustments for exhaustiveness

21.19 Examples of adjustments to enterprise accounting data for exhaustiveness are absence from statistical files, exemption from tax and social declarations, and evasion.

Examples of specific adjustments are as follows:

(a) evasion regarding output sold and sale of goods for resale. Enterprises may underestimate the value of sales to evade paying tax, and an adjustment is made for this under-declaration based on information provided by the tax offices;

(b) income in kind is employee recompense in the form of goods and services supplied free of charge. When this output and income are not recorded in the business accounts, an adjustment is made to the recorded values, for use in the national accounts. Where employees are housed free of charge, an estimate of the corresponding property rentals is included in output and income of employees where they are not already included in the business accounts;

(c) tips. When employees receive tips from customers of the enterprise, these must be considered as part of the turnover and thus of output. Tips not recorded as output and employee income in the business accounts are estimated and the output and income adjusted for the national accounts.

Specific issues

Holding gains/losses

21.20 Holding gains and losses are one of the main difficulties in the transition from business accounts to national accounts, mainly due to the nature of the information available in business accounts. For example, intermediate consumption of raw materials may not be a direct purchase, but a withdrawal from stock. In national accounts, the withdrawal from stock is valued at the current market price, while in business accounts the withdrawal from stock is valued at its historical cost, i.e. at the price of the goods when purchased. The difference between the two prices is a holding gain/loss in national accounts.

21.21 Eliminating holding gains/losses on stocks is not easy as it requires the collection of numerous pieces of supplementary accounting information and the use of many assumptions. The information collected must relate both to the nature of the products stocked and the change in prices in the course of the year. Since the information available on the nature of products more often than not relates to sales and purchases rather than to the stocks themselves, it is necessary to base the estimates on models the relevance of which is difficult to verify. But, despite its imprecision, this exercise is the price that has to be paid for being able to use the data from business accounting.

21.22 The valuations of assets at fair value provide a better picture of the balance sheet than valuations at historic cost but they also generate more data on holding gains/losses.

Globalisation

21.23 Globalisation makes the use of business accounts more difficult when businesses have foreign establishments. The activity carried out beyond national borders must be excluded from the accounts in order to use them for national accounts. This exclusion is difficult except in the best case where tax regulations require enterprises to publish accounts for their activity exclusively on national territory. The existence of multi-national groups poses valuation problems, as exchanges between subsidiaries can be made on the basis of prices not observed in the open market, but set to minimise global tax burden. National accountants make adjustments to bring the prices of intra-group transactions into line with market prices. In practice this is extremely difficult, due to the lack of information and the lack of a comparable free market for highly specialised products. Adjustments can only be made in exceptional cases, based on an analysis that is accepted by experts in the area concerned.

21.24 Globalisation has supported the reintroduction of recording imports and exports on the basis of change of ownership of goods, rather than change of physical location. This renders business accounts more appropriate for national accounts, as business accounts are also based on a change of ownership of goods rather than physical change of location. When an enterprise places processing with an enterprise based outside the national economic territory, business accounts are on the appropriate basis to act as a data source for the national accounts. Whilst this helps, there remain many measurement issues in the estimation of multinational businesses in the national accounts.

Mergers and acquisitions

21.25 Corporate restructuring causes the appearance and disappearance of financial assets and liabilities. Where a corporation disappears as an independent legal entity because it has been absorbed by one or more corporations, all financial assets/liabilities including shares and other equity that existed between that corporation and those that absorbed it disappear from the system of national accounts. That disappearance is recorded as changes in sector classification, and structure in the other changes in the volume of assets accounts.

21.26 However, the purchase of shares and other equity of a corporation as part of a merger is recorded as financial transaction between the purchasing corporation and the previous owner. Replacement of existing shares by shares in the takeover or new corporation are recorded as redemptions of shares accompanied by the issue of new shares. Financial assets/liabilities that existed between the absorbed corporation and third parties remain unchanged and pass to the absorbing corporation(s).

21.27 Where a corporation is legally split up into two or more institutional units, new financial assets and liabilities (appearance of financial assets) are recorded as changes in sector classification and structure.

CHAPTER 22

Satellite accounts

Introduction

22.01 This Chapter provides a general introduction to satellite accounts. It describes and discusses how the central framework can be used as a building-block-system to serve many important specific data needs.

22.02 Satellite accounts elaborate or modify the tables and accounts in the central framework to serve specific data needs.

22.03 The central framework consists of the following:

(a) integrated economic accounts (institutional sector accounts) providing an overview of all economic flows and stocks;

(b) an input-output framework providing an overview of the supply and use of goods and services in current prices and in volume terms;

(c) tables linking the industry information in the input-output framework with the institutional sector accounts;

(d) tables on expenditure by function of government, households and corporations;

(e) tables on population and employment.

The accounts and tables can be on an annual or quarterly basis, and be national or regional.

22.04 Satellite accounts can meet specific data needs by providing more detail, by rearranging concepts from the central framework or by providing supplementary information, such as non-monetary flows and stocks. They may deviate from the central concepts. Changing those concepts can improve the link with economic theory concepts such as welfare or transactions costs, administrative concepts such as taxable income or profits in the business accounts, and policy concepts such as strategic industries, the knowledge economy and business investments used in national or European economic policy. In such cases, the satellite system will contain a table showing the link between its major aggregates and those in the central framework

22.05 Satellite accounts can range from simple tables to an extended set of accounts. Satellite accounts can be compiled and published on an annual or quarterly basis. For some satellite accounts, production at more extended intervals such as once every five years is appropriate.

22.06 Satellite accounts can have various characteristics:

(a) links to functions, as in functional satellite accounts;

(b) links to industries or products, which is one type of special sector accounts;

(c) links to institutional sectors, a second type of special sector accounts;

(d) extension with physical or other non-monetary data;

(e) extra detail;

(f) use of supplementary concepts;

(g) modification of some basic concepts;

(h) use of modelling or inclusion of experimental results.

For a specific satellite account, one or more of the characteristics mentioned in points (a) to (h) can apply. This is illustrated in Table 22.1.

Table 22.1 — Overview of satellite accounts and their major characteristics

	Eight characteristics of satellite accounts								
		Special sector accounts							
	Functional accounts	Links to industries or products	Links to institutional sectors	Inclusion of non-monetary data	Extra detail	Supplementary concepts	Different basic concepts	Experimental results and more use of modelling	Part of EU transmission programme
1. *Satellite accounts described in this Chapter*									
Agricultural		X			X	X			X
Environmental	X	X		X	X	X	X	X	X
Health	X	X		X	X		X		X
Household production			X	X	X		X	X	
Labour and SAM		X	X	X	X				
Productivity and growth		X		X	X	X	X	X	X
R&D	X	X		X	X		X	X	
Social protection	X			X	X				X
Tourism	X	X		X	X	X			
2. *Satellite accounts described in other chapters*									
Balance of payments			X		X				X
Government finance			X		X	X			X
Monetary and financial statistics, and flow of funds			X		X	X			X
Supplementary pension table			X		X	X	X	X	X
3. *Examples of other satellite accounts with international guidelines, or in the EU data transmission programme*									
Corporate activity			X		X				
Informal sector					X			X	
Non-profit institutions			X		X			X	
Public sector			X		X				
Tax revenue tables			X		X				X

22.07 In this Chapter, characteristics of satellite accounts will be discussed and the following nine different satellite accounts described briefly:

(a) agricultural accounts;

(b) environmental accounts;

(c) health accounts;

(d) household production accounts;

(e) labour accounts and social accounting matrices;

(f) productivity and growth accounts;

(g) R&D accounts;

(h) social protection accounts;

(i) tourism accounts.

Other chapters hold descriptions of other satellite accounts such as balance of payments, government finance statistics, monetary and financial statistics and the supplementary pension table.

In the 2008 SNA, several satellite accounts are described at length which are covered to a limited extent in the ESA 2010. Examples are as follows:

(a) 2008 SNA Chapter 21 Corporate activity accounts;

(b) 2008 SNA Chapter 22 Public sector accounts;

(c) 2008 SNA Chapter 23 Non-profit institutions accounts; and

(d) 2008 SNA Chapter 25 Informal sector accounts.

For international comparison of the level and composition of taxes, national tax revenue statistics are reported to the OECD, IMF and Eurostat. The concepts and data are fully linked to those in the national accounts. Tax revenue statistics is an example of a national accounts' satellite.

Those examples are of well-established satellite accounts, as they are subject to international guidelines or are already part of an international transmission programme. Satellite accounts developed in various countries illustrate the importance and usefulness of satellite accounts, and examples are:

(a) cultural and creative sector accounts, illustrating the economic importance of the cultural and creative sectors;

(b) education accounts, showing the economic importance of the supply, use and financing of education;

(c) energy accounts, showing the economic importance of the various types of energy and their link to imports, exports and government taxes and subsidies;

(d) fishery and forestry accounts, showing their economic importance for the nation and regions;

(e) information and communication technology (ICT) accounts, showing the supply and use of major ICT products and their producers;

(f) redistribution by public expenditure account, showing which income groups benefit from public expenditure on education, health care, culture and housing;

(g) residential building accounts, showing the economic importance of residential building for the nation and regions;

(h) safety-related accounts, showing public and private expenditure on safety;

(i) sports-related accounts, showing the economic importance of sports;

(j) water-related accounts, showing the interaction between the physical water system and the economy at national and river basin level.

22.08 A major group of satellite accounts have a functional approach. The various functional classifications are described in this Chapter.

22.09 The wide range of satellite accounts illustrates that the national accounts serve as a frame of reference for a variety of statistics. They also illustrate the merits and limitations of the central framework. By applying the concepts, classifications and presentations such as the supply and use tables of the central framework to a wide range of topics, the flexibility and relevance of the satellite accounts approach for these topics is demonstrated. At the same time, additions, rearrangements and conceptual modifications illustrate the limitations of the central framework for the study of these topics. For example, the environmental accounts extend the central framework to take account of environmental externalities and the household production accounts extend the production boundary to include unpaid household services. In this way, they demonstrate that the central framework's concepts of product, income and consumption are not complete measures of welfare.

22.10 Major advantages of satellite accounts include the following:

(a) they are based on a set of clear definitions;

(b) application of a systematic accounting approach. Examples are the breakdown of one total into various dimensions, such as the supply and use of goods and services by product and by industry; who produces, who pays and who benefits from a service; systematic stock-flow accounting; and consistent accounting in monetary and non-monetary terms. A systematic accounting approach is characterised by consistency and coherence. It also enables bookkeeping analyses based on decomposition, where change in the total is explained in terms of changes in the parts, change in value is explained by changes in volume and price, and changes in stocks are accounted for by the corresponding flows and constant ratios used in input-output analysis. Such bookkeeping analyses can be supplemented with modelling in which economic behaviour is taken into account;

(c) linkage to basic national accounting concepts. Examples are the concepts of specific stocks and flows like production, compensation of employees, taxes, social benefits and capital formation, the concepts in the classifications by industry and by institutional sector such as the agriculture and manufacturing industries or the government sector, and major balancing items such as value added, domestic product, disposable income and net worth. Such basic national accounting concepts are well-established throughout the world, stable over time and their measurement is relatively immune to political pressure;

(d) linkage to national accounts statistics; these are readily available, comparable over time, compiled to common international standards, and place the satellite accounts measures in the context of the national economy and its major components, such as the relationship with economic growth and public finance.

Functional classifications

22.11 Functional classifications classify expenditure by sector, and by the purpose of the expenditure. They illustrate the behaviour of consumers, government, non-profit institutions and producers.

22.12 The four different functional classifications that exist in the ESA are as follows:

(a) classification of individual consumption by purpose (Coicop);

(b) classification of the functions of government (COFOG);

(c) classification of the purposes of non-profit institutions (COPNI);

(d) classification of outlays of producers by purpose (COPP).

22.13 In Coicop 14 main categories are distinguished:

(a) food and non-alcoholic beverages;

(b) alcoholic beverages, tobacco and narcotics;

(c) clothing and footwear;

(d) housing, water, electricity, gas and other fuels;

(e) furnishings, household equipment and routine household maintenance;

(f) health;

(g) transport;

(h) communication;

(i) recreation and culture;

(j) education;

(k) restaurants and hotels;

(l) miscellaneous goods and services;

(m) individual consumption expenditure of non-profit institutions serving households; and

(n) individual consumption expenditure of general government.

The first 12 categories sum up total individual consumption expenditure by households. The last two identify individual consumption expenditure by the non-profit institutions serving households (NPISHs) and general government sectors, i.e. their social transfers in kind. Together all 14 items represent actual final consumption by households.

22.14 The individual consumption expenditure of NPISHs and general government is broken down into five common sub-categories reflecting major policy issues: housing, health, recreation and culture, education and social protection. These are also Coicop functions for the individual consumption expenditure by households; social protection is a sub-category of 12 *miscellaneous goods and services*. As a consequence, Coicop also shows for each of these five common sub-categories, the role of private households, government and non-profit institutions serving households. For example, it can describe the role of government in providing housing, health and education.

22.15 Coicop also serves other major uses such as using the subcategories to show expenditure by households on consumer durables. Household budget surveys frequently use a classification scheme based on Coicop to collect household expenditure information. This can then be allocated to products for a supply and use table.

22.16 The classification of government expenditure by function (COFOG) is a major tool for describing and analysing government finance. The 10 major categories distinguished are:

(a) general public services;

(b) defence;

(c) public order and safety;

(d) economic affairs;

(e) environmental protection;

(f) housing and community amenities;

(g) health;

(h) recreation, culture and religion;

(i) education; and

(j) social protection.

The classification can be used to classify individual and collective consumption expenditure by the government. However, it also serves to illustrate the role of other types of expenditure such as subsidies, investment grants and social assistance in cash, for pursuing policy purposes.

22.17 For describing and analysing the expenditure of private non-profit institutions serving households, COPNI is used. The nine major categories distinguished are:

(a) housing;

(b) health;

(c) recreation and culture;

(d) education;

(e) social protection;

(f) religion;

(g) political parties, labour and professional organisations;

(h) environmental protection; and

(i) services n.e.c.

22.18 For describing and analysing the behaviour of producers, COPP can be used. Six main categories are distinguished:

(a) outlays on infrastructure;

(b) outlays on research and development;

(c) outlays on environmental protection;

(d) outlays on marketing;

(e) outlays on human resource development;

(f) outlays on current production programmes, administration and management.

In combination with information by transaction, COPP can provide information on the 'outsourcing' of business services, i.e. the substitution of ancillary activities by purchases of corresponding services from other producers such as cleaning, catering, transport and research.

22.19 COFOG and COPP show expenditure on environmental protection by the government and producers. This information is used to describe and analyse the interaction between economic growth and environment.

22.20 Some expenditure, like final consumption expenditure and intermediate consumption, can be classified by function and by product group. The product classification shows which products are involved and gives a description of the different production processes and their links with the supply and use of products. This contrasts with the functional classifications as follows:

(a) expenditure on different products can serve one function;

(b) expenditure on one product can serve different functions;

(c) some expenditure is not transactions in products, but can be very important for a functional classification, e.g. subsidies and social security benefits in cash for the classification of expenditure by general government.

Major characteristics of satellite accounts

Functional satellite accounts

22.21 Functional satellite accounts focus on describing and analysing the economy for a function, such as environment, health, and research and development. For each function they provide a systematic accounting framework. They do not provide an overview of the national economy, but focus on what is relevant for the function. To that end, they show detail not visible in the aggregated central framework, rearrange information, add information on non-monetary flows and stocks, ignore what is irrelevant for the chosen function and define functional aggregates as the key concepts.

22.22 The central framework is mainly institutional in nature. A functional satellite account can combine a functional approach with an activity and product analysis. Such a combined approach is useful for many fields, such as culture, sport, education, health, social protection, tourism, environmental protection, research and development (R&D), development aid, transportation, safety and housing. Most of the fields refer to services; they generally cover a number of activities and correspond in many cases to subjects that are related to questions of economic growth or of social concern.

22.23 A key concept in functional satellite accounts is national expenditure on the function as shown in Table 22.2. This key concept is also useful in defining the coverage of the functional satellite account.

22.24 To analyse the uses for a function involves asking questions such as 'How many resources are devoted to education, transportation, tourism, environmental protection, and data processing?'. In order to answer such questions, decisions have to be made with regard to:

(a) which products are relevant for the field concerned. National expenditure includes all the current uses of, and capital formation in, such products;

(b) for which activities will capital be recorded;

(c) which transfers are relevant for this field.

Table 22.2 — National expenditure on a function or product

	Annual data series
Actual final consumption of the products chosen	
Market products	
Non-market products	
Individual	
Collective	
Intermediate consumption	
Actual	
Internal	
Gross capital formation	
In the chosen products	
Other	
Chosen current transfers	
Chosen capital transfers	
Uses of resident units financed by the rest of the world	
National expenditure	

Table 22.3 — The supply of characteristic and connected products

	Output by industry							Total	Imports	Total supply at basic prices	Trade and transport margins	Taxes on products	Subsidies on products	Total supply at purchasers' prices
	Characteristic producers				Other producers									
	Principal product	Secondary product	Ancillary	Total	Principal	Secondary	Ancillary							
Characteristic products														
1.														
2.														
…														
Connected products														
1.														
2.														
…														
Other products														
Total														

Table 22.4 — The use of characteristic and connected products

	Costs of production by industry							Total	Exports	Final consumption			Total	Gross capital formation	Total use at purchasers' prices
	Characteristic producers				Other producers					Households	Government	NPISH			
	Principal product	Secondary product	Ancil-lary	Total	Principal	Secon-dary	Ancil-lary				Collective Individual				
Characteristic products															
1.															
2.															
…															
Connected products															
1.															
2.															
….															
Other products															
Total															
Compensation of employees															
Other net taxes on production															
Consumption of fixed capital															
Specific products (characteristic or connected)															
Other															
Operating surplus, net															
Total															
Supplementary information															
Labour inputs															
Gross fixed capital formation															
Specific products															
Other															
Fixed capital stock, net															
Specific products															
Other															

22.25 Depending on the field, the design of a satellite account will emphasise the following:

(a) the detailed analysis of the production and uses of the specific goods and services, such as R&D, ICT or transport;

(b) the detailed analysis of transfers, such as for social protection;

(c) production, uses and transfers equally, such as for education and health;

(d) uses as such, in areas such as tourism and environmental protection;

(e) the financing of social protection and health by government and non-profit institutions.

22.26 Two types of products can be distinguished: characteristic products and connected products. The first category covers the products which are typical for the field under study. For such products, the satellite account can show how the products are produced, what kinds of producers are involved, what kinds of labour and fixed capital they use and the efficiency of the production process. For example, for health, characteristic products are health services, public administration services, education and R&D services in health.

22.27 Connected products are relevant for a function without being typical, either by nature or because they are classified in broader categories of products. For example, for health, transport of patients is a connected service. Other examples of connected products are pharmaceutical products and other medical goods, like glasses. For such products, the satellite account does not show the features of production. The precise borderline between characteristic and connected products depends on the economic organisation in a country and the purpose of a satellite account.

22.28 Some services may appear in two or more satellite accounts. For example, research in health services in higher education institutions is a product relevant for satellite accounts on research and development, as well as education and health. This also implies that the national expenditure on various functions may partly overlap; simple aggregation of such expenditures to arrive at a total as a percentage of GDP may involve double-counting.

22.29 The concepts in the satellite account may deviate from those in the central framework. For example, voluntary work may be included in satellite accounts on education and health. For a satellite account on transport, the ancillary transport services can be shown separately. For a satellite account on development aid, the loans which are given at preferential conditions are accounted for. Benefits or costs resulting from rates of interest lower than the market ones are recorded as implicit transfers.

22.30 For satellite accounts on social protection and development aid, specific transfers are the most important components of national expenditure. In other fields, such as education and health, the major part of the transfers, most of which are in kind, are a means of financing the acquisition by users. This implies that they are already included in expenditure on final consumption, intermediate consumption and capital formation and should not be recorded twice. However, this does not apply to all the transfers, e.g. student grants may serve to finance various outlays in addition to tuition fees or school books; this residual part should then be recorded as a transfer in the satellite account.

22.31 The functional satellite account can provide an overview of the users or beneficiaries. The classification of users and beneficiaries can be based on the classification of institutional sectors and types of producers, e.g. market producers, non-market producers, government as a collective consumer, households as consumers and rest of the world. Various sub-categories may be distinguished, e.g. by industry and by institutional subsector.

22.32 In many satellite accounts, households or individuals are the most important type of users and beneficiaries. In order to be useful for social policy and analysis, a further breakdown of households is necessary. Various criteria may be used according to different purposes, such as income, age, gender, location, etc. For policy and analysis, knowledge of the number of people concerned in each category is needed in order to calculate the average consumption or transfer, or the number of people who do not benefit.

Special sector accounts

22.33 Special sector accounts provide an overview focused on one industry or product, a regrouping of various industries or products, one subsector or a regrouping of various subsectors. Three types of special sector accounts can be distinguished:

(a) those linked to industries or products;

(b) those linked to institutional sectors;

(c) those combining both approaches.

Examples of special sector accounts linked to industries or products are agricultural accounts, forestry and fishery accounts, tourism accounts, ICT accounts, energy accounts, transport accounts, residential building accounts and accounts for the creative sector.

Examples of special sector accounts linked to institutional sectors are government finance statistics, monetary and financial statistics, balance of payments, public sector accounts, accounts for non-profit institutions, household accounts and accounts on corporate activity. Tax revenue statistics can be regarded as supplementary tables to government finance statistics.

22.34 The special sector accounts can also focus on an integrated analysis of economic activities within one or more institutional sectors. For example, accounts for subsectors of non-financial corporations may be established by grouping according to their principal economic activity. The analysis may cover the full economic process, from production to accumulation. This can be done systematically at a fairly aggregated level of the standard industry classification. It can also be carried out for selected industries of special interest to a country. Similar analyses can be made for household production activities, at least up to the point where entrepreneurial income is calculated. It can also be useful to emphasise activities that play a predominant role in the economy's external transactions. These key activities may include the petroleum sector, banking, mining activities, activities linked to specific crops, food products and beverages such as coffee, flowers, wine and whiskey, and tourism. They can play a vital role in the national economy, by accounting for an important part of exports, employment, foreign exchange assets and government resources. Key sectors may also include sectors that deserve special attention from the point of view of social economic policy. Examples of this are agricultural activities receiving subsidies and other transfers from central, local or European government, or that are protected by substantial import duties.

22.35 The first step in drawing up special sector accounts is defining the key activities and their corresponding products. For this, items of the International Standard Industrial Classification (ISIC) or the corresponding national classification may need to be grouped together. The extension of the key sector depends on the economic circumstances and the requirements for policy and analysis.

22.36 A goods and services account for the key products is established showing the resources and uses of these products. A production account and a generation of income account for the key industries are built up. For the key industries and products, detailed classifications are used for a full understanding of the economic process and the related valuation procedures in this field. There generally exists a combination of market and administered prices, and a complex system of taxes and subsidies.

22.37 The key products and key industries may be analysed in the context of a supply and use table, as shown in Tables 22.5 and 22.6. Key industries are shown in detail in columns, and other industries may be aggregated. In the rows, key products are similarly shown in detail, and other products aggregated. At the bottom of the use table, rows show labour inputs, gross fixed capital formation and stocks of fixed assets. When the key activity is carried out by very heterogeneous types of producers, such as small farmers and big plantations owned and operated by corporations, the two groups of producers are distinguished, as they have different cost structures and behave differently.

22.38 A set of accounts is compiled for the key sector. To this end, the key sector has to be delimited. In the case of oil and mining activities, the key sector generally consists of a limited number of big corporations. All transactions of the latter are covered, even when they carry out secondary activities. The distinction between public, foreign controlled and private corporations can also be fundamental when dealing with a key sector. The business accounts themselves have to be carefully studied for each big corporation involved to carry out an integrated analysis. Part of mining activities may be carried out by small corporations or unincorporated enterprises. These units must be included in the key sector, even if it is necessary to rely on partial information coming from statistical surveys or administrative data.

22.39 In many cases, government plays an important role in connection with key activities, either via taxes and property income receipts, or via regulatory activity and subsidies. Accordingly, the detailed study of transactions between the key sector and general government is important. The classification of transactions may be extended to identify those flows connected with the key activity, including the relevant taxes on products. Such flows are received, in addition to the general budget itself, by various government agencies, such as ministries for special purposes, universities, funds and special accounts. For analysis, it can be very useful to indicate what uses are made by the government of such funds. This calls for an analysis by purpose of this part of government expenditure.

Table 22.5 — A supply table for key industries and products

	Output by industry			Other producers	Total	Imports	Total supply at basic prices	Trade and transport margins	Taxes on products	Subsidies on products (—)	Total supply at purchasers' prices
	Key industries										
	1	2 …	Total								
Key products											
1.											
2.											
…											
Other products											
Total											

Table 22.6 — A use table for key industries and products

	Costs of production by industry				Other producers	Total	Exports	Final consumption				Total	Gross capital formation	Total use at purchasers' prices
	Key industries							Households		Government	NPISH			
	1	2	…	Total				Collective	Individual					
Characteristic products														
1.														
2.														
…														
Other products														
Total														
Compensation of employees														
Other net taxes on production														
Consumption of fixed capital														
Operating surplus, net														
Total														
Supplementary information														
Labour inputs														
Gross fixed capital formation														
Fixed capital stock, net														

22.40 When the key activities are based on natural non-renewable resources such as subsoil resources, the key sector accounts record the changes in these resources through new discoveries and depletion, in the other changes in volume of assets account and holding gains and losses on them in the revaluation account. Those data are crucial for assessing the economic performance of the economy. More broadly, the key sector accounts may be extended to environmental accounting.

22.41 The key sector accounts can be presented in the framework of integrated economic accounts. A column or group of columns is introduced for key sectors and other columns are renamed where relevant, such as 'other non-financial corporations' or 'other households'. This makes it possible to see the respective shares of the key sector and other sectors in transactions and balancing items. The precise format of such a table depends on the objectives pursued. One more step may consist in showing in additional tables the 'from-whom-to-whom' relationship between the key sector and other sectors, including the rest of the world.

Inclusion of non-monetary data

22.42 A major characteristic of many satellite accounts is the inclusion of non-monetary data, such as data on CO_2 emissions by industry in the environmental accounts or number of treatments by type of health care in the health accounts. The linkage of such non-monetary data with monetary data can provide key ratios, such as CO_2 emissions per billions of euro of value added or the costs per treatment. Table 22.7 provides a wide range of examples.

Extra detail and supplementary concepts

22.43 Two other major characteristics of satellite accounts are extra detail and supplementary concepts. A wide range of examples are provided in Tables 22.8 and 22.9.

Table 22.7 — Examples of non-monetary data in satellites

Satellite	Example of non-monetary data	Ratio of monetary and non-monetary data?
Education accounts	Number of pupils and students	Costs and fees per pupil/student
	Number of teacher	Compensation of employees per teacher
Environmental accounts	Tonnes of oil	Price of oil per barrel
	CO_2 emission by industry	CO_2 emission by industry per bin euro of value added
Government finance	Employment in government sector	Compensation of employees per employee
	Number of social benefits	Average social benefit
Health accounts	Number of treatments/patients by type of health care	Costs per treatment/patient
Household production accounts	Time use in household production	Opportunity cost of time use
Labour accounts	Employment (hours worked/fte) by industry	Compensation of employees per hour worked/fte
	Number of jobs	
Productivity and growth accounts	Labour input by industry	Labour productivity by industry
R&D accounts	Number of patents granted	
	Employment in R&D sector	Compensation of employees per employee
Safety accounts	Number of prisoners	Costs per prisoner
Social protection accounts	Number of social benefits, e.g. pension beneficiaries	Average social benefit by (type of) scheme
Tourism accounts	Number of tourists	Expenditure per tourist

Table 22.8 — Examples of extra detail in various satellites

Satellite	Extra detail
Agricultural accounts	More detail on the production of various agricultural products
Environmental accounts	Much more detail on the values of the stocks and flows of natural resources
	More detail on environmental protection expenditure
Health accounts	Detailed breakdown of health care services
Household production accounts	Household production broken down by principal function (e.g. housing, nutrition, care)
Personal income and wealth accounts	Information on the distribution of personal income and wealth
Labour accounts and SAM	Compensation of employees and employment by age, gender and level of education
Social protection accounts	Revenue and expenditure by individual social protection scheme and grouping of schemes
Tax revenue tables	Tax revenue broken down into a much more detailed classification

Table 22.9 — Examples of supplementary concepts in various satellites

Satellite	Supplementary concepts
Agricultural accounts	Three indicators of agricultural income
Environmental accounts	Environmental taxes
Government finance	Government revenue and expenditure
Informal sector accounts	Informal sector
Productivity and growth accounts	Total factor productivity
Social protection accounts	Total expenditure on old age benefits
Tax revenue tables	Total tax revenues according to various alternative definitions

Different basic concepts

22.44 The use of different basic concepts is not common in satellite accounts. A relatively minor variation is that for various satellite accounts some services are not treated as ancillary, e.g. for a transport satellite account, transport service is not treated as ancillary. However, for some satellite accounts, major changes in the basic concepts can be required, e.g. in the environmental account domestic product could be adjusted for depletion of natural resources. Examples are provided in Table 22.10.

Use of modelling and inclusion of experimental results

22.45 Some satellite accounts may be characterised by the inclusion of experimental results or the use of modelling; the figures in the satellite account are less reliable than those in the core accounts. However, compiling the core accounts also involves the use of econometric or mathematical models and the inclusion of experimental results. This is therefore not a fundamental difference between the core accounts framework and satellite accounts. These issues are illustrated by the examples in Table 22.11.

Table 22.10 — Examples of different basic concepts in satellites

Satellite	Different basic concept
Environmental accounts	Adjustment of Domestic Product for depletion, defensive expenditure by the government and for degradation
Health accounts	Occupational health care is not an ancillary service
Household production accounts	Unpaid household services and volunteer services are inside the production boundary

Satellite	Different basic concept
Extended accounts	Accounts including substantially more extended concepts of production and capital formation (e.g. human capital and consumer durables)
Supplementary pension table	Unfunded defined pension benefits are treated as liabilities and assets
Transport accounts	Transport services are not an ancillary service

Table 22.11 — Examples of the use of econometric or mathematical models in compiling the central framework and satellites

Central framework	Estimate of the value of financial or non-produced assets as the net present value of expected future revenue and expenditure
	Correcting household surveys for non-response using regression analysis
	Estimate of net fixed capital stock and consumption of fixed capital using the perpetual inventory method, expected economic life times and mathematical functions of depreciation
	Estimate of the value of the services of owner-occupied dwellings using housing stock data, market rents and regression analysis
	Estimate of seasonal corrections using a mathematical model
	Estimate of hedonic price changes using a mathematical model
Satellites	
Environmental accounts	Estimate of the value of depletion and degradation
Household production accounts	Estimate of the value of unpaid household services
Informal sector accounts	Experimental estimates of the value of all kinds of informal activities
Productivity and growth accounts	Estimate of the volume of capital input using age-efficiency functions for each type of asset
Supplementary pension table	Estimate of the pension entitlements using all kinds of actuarial assumptions about demography, discount rate and wage growth
Table with experimental results on treating R&D expenditure as capital formation	

Designing and compiling satellite accounts

22.46 Designing and compiling a satellite account consists of four steps:

(a) defining the purposes, uses and requirements;

(b) selecting what is relevant from the national accounts;

(c) selecting relevant supplementary information, e.g. from various specific statistics or administrative data sources;

(d) combining both sets of concepts and figures into one set of tables and accounts.

22.47 Designing and compiling satellite accounts for the first time often reveals unexpected results during the four steps. As a consequence, drawing up satellite accounts is a work-in-progress. Only after experience of compiling and using the satellite, and making modifications where necessary, can an experimental set of tables be transformed into a mature statistical product.

22.48 In selecting what is relevant from the national accounts, three aspects can be distinguished: the international national accounting concepts, the operational concepts used in the national account statistics of a country, and the reliability of the national accounts statistics.

22.49 In designing and compiling a satellite account, applying the concepts of the central framework for a purpose often reveals features. From the point of view of the purpose, these can be helpful as well as unexpected limitations. For example, in designing and compiling a research and development account for the first time, problems such as the overlap with R&D on software and health care, or the role of multinationals in importing and exporting R&D, may be revealed.

22.50 A similar process applies to the operational concepts used in compiling national accounts statistics. Essential detail may turn out to be absent due to an excessively aggregate level of compilation or publication, or to the fact that universal concepts may not have been applied strictly. For example, the R&D activities by some major multinationals may be included in the industry of their major activities and not in the industry of R&D services.

22.51 The reliability of parts of the national accounts statistics may be a problem. The national accounts statistics were compiled and published without the purpose of the satellite account in mind. Simply selecting the relevant figures out of the official national accounts statistics will often reveal that the size, composition or development over time is not plausible for the purpose. As a consequence, current data sources and compilation methods have to be checked and enhanced by additional data sources or improved compilation methods.

22.52 Selecting relevant information from sources other than the national accounts such as other official statistics or administrative data sources will generate similar problems in terms of concepts and figures: the concepts officially used may reveal unexpected flaws in terms of the specific purpose of the satellite, the actual concepts used may differ from the official concepts and the reliability, detail, timing and frequency may pose problems. All these problems should be tackled, either through making additional estimates to overcome the difference in concepts, by classifying flows in non-monetary terms by industry or sector, or by adjusting the concepts used in the satellite account.

22.53 Combining the national accounts information and the other information into one set of tables or accounts requires additional work: omissions, overlaps and numerical inconsistencies should be resolved and the plausibility of the results assessed. Preferably a fully balanced set of tables will result. However, it may be necessary to show discrepancies between data sources and alternative approaches.

22.54 Transforming a consistent satellite account into a product for data users may involve additional steps. An overview table with key indicators for a number of years may be introduced. These key indicators could focus on describing the size, components and developments of the specific issue involved, or may show the links to the national economy and its major components. Extra detail or classifications relevant for political and analytical purposes may be added. Detail with little value added or compiled at relatively high costs may be dropped. Efforts could also focus on reducing the complexity of the tables, increasing simplicity and transparency for data users and including standard bookkeeping decompositions in a separate table.

Nine specific satellite accounts

22.55 In the remainder of this Chapter, the following satellite accounts are discussed briefly:

(a) agricultural accounts;

(b) environmental accounts;

(c) health accounts;

(d) household production accounts;

(e) labour accounts and SAMs;

(f) productivity and growth accounts;

(g) R&D accounts;

(h) social protection accounts;

(i) tourism satellite accounts.

Agricultural accounts

22.56 An example of an agricultural account is the economic accounts for agriculture (EAA)[1]. Its purpose is to describe agricultural production and the

[1] Regulation (EC) No 138/2004 of the European Parliament and of the Council of 5 December 2003 on the economic accounts for agriculture in the Community (OJ L 33, 5.2.2004, p. 1).

development of agricultural income. This information is used for analysing the economic situation of a Member State's agriculture and for monitoring and evaluating the common agricultural policy in the Union.

22.57 The EAA consist of a production account, a generation of income account, an entrepreneurial income account and a capital account for agricultural production. The production account contains an elaborate breakdown showing output for a range of agricultural products, as well as non-agricultural secondary activities; substantial detail is also presented for intermediate consumption and capital formation. Data for the production account and gross fixed capital formation are at both current prices and in volume terms. In addition, three agricultural income indicators are presented as follows:

(a) index of the real income of factors in agriculture per annual work unit, which is taken as the full-time equivalent;

(b) index of real net agricultural entrepreneurial income per non-salaried annual work unit, which is taken as the full-time equivalent;

(c) net entrepreneurial income of agriculture.

The indices and changes in real terms of the values of the income indicators are obtained by deflating the corresponding nominal data with the implicit price index of GDP.

22.58 The agricultural industry in the EAA closely resembles the agricultural industry in the central framework. However, there are some differences. For example, units engaged in seed production for research or certification or units for which the agricultural activity represents solely a leisure activity, are left out. But most of the agricultural activities of units whose principal activity is not agricultural are included in the agricultural industry.

22.59 The EAA focus on the production process and the income derived from it. However, in principle a satellite account on agriculture need not correspond fully to the EAA. Agricultural accounts could also include a supply and use table providing a systematic overview of the supply and use of agricultural products. This would provide information on the role of imports including the role of import duties, and developments in the demand for agricultural products such as exports and final consumption by households, and the role of related taxes and subsidies. The agricultural accounts could also be expanded by including secondary non-agricultural activities, such as those for leisure activity. This can reveal important trends and substitution mechanisms. The interaction with the government can be made explicit by adding a table showing all income and capital transfers by local, central, or European government to the agricultural industry; this may also include special treatments in the tax system. Agricultural accounts could also be designed like a special sector account and include a full sequence of accounts including balance sheets and financial accounts, for farmers and corporations engaged in agriculture.

Environmental accounts

22.60 In the international guidelines on environmental accounts (System of Environmental-Economic Accounting, SEEA, 2003)[2], an elaborate accounting framework is presented for describing and analysing the environment and its interactions with the economy. The environmental accounts are a satellite account of the national accounts. This implies that the same classifications and concepts are used; modifications are introduced only where it is necessary for the purpose of environmental accounts.

22.61 The integrated set of accounts for economic and environmental information permits an analysis of the contribution of the environment to the economy and the impact of the economy on the environment. It meets the needs of policymakers by providing indicators and descriptive statistics to monitor the interaction between the environment and the economy. It can also serve as a tool for strategic planning and policy analysis to identify more sustainable development paths. For example, policymakers determining the development of industries making extensive use of environmental resources either as inputs or sinks need to be aware of the long-term environmental effects. Policymakers setting environmental standards also need to be aware of the likely consequences for the

[2] The handbook is published under the joint responsibility of the United Nations, the European Commission, the International Monetary Fund, the OECD and the World Bank.

economy, e.g. which industries are likely to suffer and what the consequences for employment and purchasing power are. Alternative environmental strategies can be compared by taking into account the economic consequences.

22.62 In the central framework, various aspects of environmental accounting have been taken into account. In particular, many cost and capital items of accounting for natural resources are identified separately in the classifications and accounts dealing with stocks and other volume changes of assets. For example, the classification of non-produced assets shows separate items for subsoil assets like oil reserves, mineral reserves, non-cultivated biological resources and water resources. Such features facilitate the use of the central framework as a point of departure for environmental accounting. However, several elements of the central framework, particularly those in the account for other volume changes, are broken down further and reclassified in the satellite account, and other elements are added.

22.63 From an environmental point of view, there are two major drawbacks with the central framework and its key aggregates such as GDP, capital formation and saving. First, the depletion and scarcity of natural resources has limited coverage, and these factors can threaten the sustained productivity of the economy. Second, the central framework does not cover the degradation of environmental quality and the consequences for human health and welfare.

22.64 In the central framework, only produced assets are taken into account in the calculation of net value added. The cost of their use is reflected in intermediate consumption and consumption of fixed capital. Non-produced natural assets — such as land, mineral reserves and forests — are included in the asset boundary insofar as they are under the effective control of institutional units. However, their use is not accounted for in the costs of production. This implies either that the price of the products does not reflect such costs, or, in case of depletion costs, that such costs are included with other unidentified elements in the residual derivation of operating surplus. Environmental accounts allow such costs to be explicitly recognised and estimated.

22.65 The SEEA 2003 environmental accounting framework comprises five categories:

(a) physical and hybrid flow accounts;

(b) economic accounts for environmental transactions;

(c) environmental asset accounts in physical and monetary terms;

(d) accounts for defensive expenditure and depletion;

(e) modifying aggregates from the central framework to account for degradation.

22.66 Physical and hybrid flow accounts record four different types of flows:

(a) natural resources: mineral, energy resources, water, soil and biological resources. At the moment they are sold on markets, they enter the economic sphere and can be characterised as products;

(b) ecosystem inputs: oxygen necessary for combustion and water through rainfall or natural watercourses and other natural inputs like nutrients and carbon dioxide required by plants for growth; this excludes water, nutrients or oxygen supplied as products by the economy;

(c) products: goods and services produced within the economic sphere and used within it, including flows of goods and services between the national economy and the rest of the world. This includes cultivated biological assets, natural resources sold or bought such as oil, wood and water, and scrap materials with an economic value;

(d) residuals: incidental and undesired outputs from the economy that have a zero or negative value to the generator. Residuals cover solid, liquid and gaseous wastes. They may be recycled or reused, or discharged into the environment. Residuals may have a positive value for a unit other than the generation. For example, household waste collected for recycling has no value to the household but may have some value to the recycler. Scrap materials that have a value realisable by the generator, like discarded equipment, are treated as products and not as residuals.

22.67 Physical flows are measured in units of quantity, which reflect the physical characteristics of the material, energy or residuals in question. A physical flow can be measured in alternative units depending on the physical characteristic that is taken into consideration. The appropriateness of one particular unit depends on the purpose and intended use of the flow account. For physical flow accounting, weight and volume are the most frequently used physical characteristics. In case of energy flows, joules or tonnes of oil equivalent are the most common unit used. The quantity units in the physical flow accounts differ from the volumes used in the central framework. For example, in the central framework the volume of a computer is not its weight, but is a weighted mix of the characteristics desired by the user, such as speed of calculation.

22.68 Physical flow accounts can be presented as supply and use tables. This is shown in Tables 22.12 and 22.13.

22.69 Hybrid flow accounts is a single matrix presentation containing both national accounts in monetary terms and physical flow accounts. An important type of hybrid accounts are hybrid supply and use tables; they combine information from the physical supply and use tables with that of supply and use tables in monetary terms.

22.70 The information in the hybrid flow accounts can be linked to environmental themes addressing particular environmental concerns, like the 'greenhouse' effect, ozone layer depletion and acidification. This requires conversion factors to translate the figures for specific substances into aggregated indicators for environmental themes. This can then result in an overview table showing the contribution of consumption and the production of various industries to the various environmental themes and GDP as in Table 22.14.

Table 22.12 — Physical supply and use table

			Industries				Consumption			Capital	Rest of the world				National environment	
Physical supply table (Millions of tonnes)			Agriculture, fishing and mining	Manufacturing electricity and construction	Services	**Total industries**	Own account transport	Other consumption	**Total consumption**	**Capital formation, changes in inventories, waste storage**	Imports of products	Natural resources and ecosystem inputs supplied by non-residents in national territory	Residuals by non-residents in RoW	Cross-boundary inflows from RoW by environmental media		**Total material supply**
			I1	I2	I3	*I*	C1	C2	*C*	*CF*	M2	M1	M1	M3	E	
Products	P1	Animal and vegetable products	66,000	49,000	1,000	**116,000**					16,000					**132,000**
	P2	Stone, gravel and building materials	112,000	163,000		**275,000**					13,000					**288,000**
	P3	Energy	65,000	59,000		**124,000**					95,000					**219,000**
	P4	Metals, machinery, etc.		10,000		**10,000**					10,000					**20,000**
	P5	Plastic and plastic products		2,000		**2,000**					2,000					**4,000**
	P6	Wood, paper, etc.	7,000	7,000		**14,000**					1,000					**15,000**
	P7	Other commodities		9,000	1,000	**10,000**					13,000					**23,000**
		All products	**250,000**	**299,000**	**2,000**	**551,000**					**150,000**					**701,000**

		Industries				Consumption			Capital	Rest of the world				National environment	
		Agriculture, fishing and mining	Manufacturing electricity and construction	Services	**Total industries**	Own account transport	Other consumption	**Total consumption**	**Capital formation, changes in inventories, waste storage**	Imports of products	Natural resources and ecosystem inputs supplied by non-residents in national territory	Residuals by non-residents in RoW	Cross-boundary inflows from RoW by environmental media		**Total material supply**
		I1	I2	I3	*I*	C1	C2	*C*	*CF*	M2	M1	M1	M3	E	
	To national territory														
Residuals	R1 CO_2	19,020	111,398	29,930	**160,348**	16,908	25,080	**41,988**	**0,990**			4,172			**207,498**
	R2 N_2O	0,007	0,042	0,012	**0,061**	0,003	0,004	**0,007**				0,001			**0,069**
	R3 CH_4	0,073	0,452	0,125	**0,650**	0,004	0,020	**0,024**	**0,477**			0,001			**1,152**
	R4 NO_x	0,061	0,275	0,151	**0,487**	0,084	0,026	**0,110**				0,025	0,117		**0,739**
	R5 SO_2	0,023	0,139	0,030	**0,192**	0,003	0,001	**0,004**				0,001	0,087		**0,284**
	R6 NH_3	0,020	0,123	0,038	**0,181**		0,007	**0,007**					0,019		**0,207**
	R7 Other to air	0,010	0,061	0,015	**0,086**		0,012	**0,012**					0,002		**0,100**
	R8 P	0,070	0,020	0,004	**0,094**		0,011	**0,011**	**0,003**			0,001	0,014		**0,123**
	R9 N	0,590	0,210	0,098	**0,898**		0,117	**0,117**	**0,024**			0,006	0,323		**1,368**
	R10 Other to water	0,030	0,021	0,006	**0,057**		0,021	**0,021**	**0,001**			0,001	0,003		**0,083**
	R11 Mining waste	7,233	2,320		**9,553**										**9,553**
	R12 Other solid waste	8,103	71,619	22,929	**102,651**	0,100	5,060	**5,160**	**71,100**			1,548	7,656		**188,115**
	Total to national territory	35,240	186,680	53,338	275,258	17,102	30,359	47,461	72,595			5,756	8,221		409,291
	To RoW territory														

Physical supply table

(Millions of tonnes)

		Industries				Consumption			Capital	Rest of the world				National environment	
		Agriculture, fishing and mining	Manufacturing electricity and construction	Services	**Total industries**	Own account transport	Other consumption	**Total consumption**	**Capital formation, changes in inventories, waste storage**	Imports of products	Natural resources and ecosystem inputs supplied by non-residents in national territory	Residuals by non-residents in RoW	Cross-boundary inflows from RoW by environmental media		**Total material supply**
		I1	I2	I3	*I*	C1	C2	*C*	*CF*	M2	M1	M1	M3	E	
	To air														
R1	CO_2			4,569	**4,569**	0,739		**0,739**							**5,308**
R4	NO_x			0,010	**0,010**	0,004		**0,004**							**0,014**
R5	SO_2			0,008	**0,008**	0,002		**0,002**							**0,010**
	Total to RoW territory			4,587	4,587	0,745		0,745							5,332
	Total residuals	**35,240**	**186,680**	**57,925**	**279,845**	**17,847**	**30,359**	**48,206**	**72,595**			**5,756**	**8,221**		**414,623**
Total material supply		285,240	485,680	59,925	**830,845**	17,847	30,359	**48,206**	**72,595**	**150,000**		**5,756**	**8,221**		**1115,623**
						Net increase by consumption (consumer durables)			Net increase in capital	Net export of products	Net extraction by non-residents	Net residuals by residents in RoW	Net cross-boundary outflow of residuals by environmental media	Net accumulation of residuals in the national environment	Net balance
Net accumulation of all materials (use less supply)						1,153	15,641	16,794	72,215	−49,000	3,000	−0,424	−4,302	372,717	411,000

Source: SEEAland data set.

Table 22.13. — Physical supply and use table (continued)

Physical use table (Millions of tonnes)															
		Industries				Consumption			Capital	Rest of the world				National environment	**Total material use**
		Agriculture, fishing and mining	Manufacturing electricity and construction	Services	Total industries	Own account transport	Other consumption	**Total consumption**	Capital formation, changes in inventories, waste storage	Exports	Resources and ecosystem inputs used by non-residents in national territory	Residuals by residents in RoW	Cross-boundary outflows to RoW by environmental media		
		I1	I2	I3	*I*	C1	C2	*C*	*CF*	X2	X1	X1	X3	E	
Products	P1 Animal and vegetable products	23,000	60,000	4,000	87,000		16,000	16,000	3,000	26,000					**132,000**
	P2 Stone, gravel and building materials	12,000	148,000	2,000	162,000		2,000	2,000	114,000	10,000					**288,000**
	P3 Energy	34,000	101,000	20,000	155,000	7,000	10,000	17,000		47,000					**219,000**
	P4 Metals, machinery, etc.		11,000		11,000	1,000		1,000	1,000	7,000					**20,000**
	P5 Plastic and plastic products		2,000		2,000					2,000					**4,000**
	P6 Wood, paper, etc.		7,000	4,000	11,000		1,000	1,000		3,000					**15,000**
	P7 Other commodities	5,000	8,000	1,000	14,000		2,000	2,000	1,000	6,000					**23,000**
	All products	**74,000**	**337,000**	**31,000**	**442,000**	**8,000**	**31,000**	**39,000**	**119,000**	**101,000**					**701,000**

		Industries				Consumption			Capital	Rest of the world				National environment	
		Agriculture, fishing and mining	Manufacturing electricity and construction	Services	Total industries	Own account transport	Other consumption	**Total consumption**	Capital formation, changes in inventories, waste storage	Exports	Resources and ecosystem inputs used by non-residents in national territory	Residuals by residents in RoW	Cross-boundary outflows to RoW by environmental media		**Total material use**
		I1	I2	I3	*I*	C1	C2	*C*	*CF*	X2	X1	X1	X3	E	
Natural resources	National natural resources														
	N1 Oil	38,000			38,000										**38,000**
	N2 Gas	27,000			27,000										**27,000**
	N3 Other	118,000	55,000		173,000										**173,000**
	N4 Wood	7,000	1,000		8,000		1,000	1,000							**9,000**
	N5 Fish	1,000			1,000						1,000				**2,000**
	N6 Other		2,000		2,000										**2,000**
	N7 Water	1,000	6,000		7,000										**7,000**
	Total national natural resources	192,000	64,000		256,000		1,000	1,000			1,000				**258,000**
	RoW natural resources														
	N5 Fish	4,000			4,000										**4,000**
	N7 Water		1,000		1,000		1,000	1,000							**2,000**
	Total RoW natural resources	4,000	1,000		5,000		1,000	1,000							**6,000**
	Total natural resources	196,000	65,000		261,000		2,000	2,000			1,000				**264,000**
Ecosystem inputs	National ecosystem inputs	15,000	81,000	22,000	118,000	10,000	13,000	23,000			2,000				**143,000**
	RoW ecosystem inputs			3,000	3,000	1,000		1,000							**4,000**
	Total ecosystem inputs	15,000	81,000	25,000	121,000	11,000	13,000	24,000			2,000				**147,000**

Physical use table

(Millions of tonnes)

		Industries				Consumption			Capital	Rest of the world				National environment	
		Agriculture, fishing and mining	Manufacturing electricity and construction	Services	Total industries	Own account transport	Other consumption	**Total consumption**	Capital formation, changes in inventories, waste storage	Exports	Resources and ecosystem inputs used by non-residents in national territory	Residuals by residents in RoW	Cross-boundary outflows to RoW by environmental media		**Total material use**
		I1	I2	I3	*I*	C1	C2	*C*	*CF*	X2	X1	X1	X3	E	
Residuals	From national territory														
	R1 CO_2													207,498	**207,498**
	R2 N_2O													0,069	**0,069**
	R3 CH_4													1,152	**1,152**
	R4 NO_X												0,669	0,070	**0,739**
	R5 SO_2												0,196	0,088	**0,284**
	R6 NH_3												0,099	0,108	**0,207**
	R7 Other from air												0,002	0,098	**0,100**
	R8 P			0,020	0,020								0,010	0,093	**0,123**
	R9 N			0,115	0,115								0,543	0,710	**1,368**
	R10 Other from water			0,010	0,010								0,002	0,071	**0,083**
	R11 Mining waste													9,553	**9,553**
	R12 Other solid waste	0,240	2,680	3,780	6,700				25,810				2,398	153,207	**188,115**
	Total from national territory	0,240	2,680	3,925	6,845				25,810				3,919	372,717	409,291
	From RoW territory														
	R1 CO_2											5,308			**5,308**
	R4 NO_X											0,014			**0,014**
	R5 SO_2											0,010			**0,010**
	Total from RoW territory											5,332			5,332
	Total	0,240	2,680	3,925	6,845				25,810			5,332	3,919	372,717	414,623
Total material use		285,240	485,680	59,925	830,845	19,000	46,000	65,000	144,810	101,000	3,000	5,332	3,919	372,717	1526,623

Table 22.14 — Net contribution of consumption and production to GDP and to six environmental themes in the Netherlands, 1993

	Percentage					
	Economy	Environment				
		Greenhouse effect	Ozone layer depletion	Acidification	Eutrophication	Solid waste
Total		100	100	100	100	100
Consumption		19	2	15	9	31
Industry		79	97	85	91	66
Capital and other sources		2	1	—	—	3
Consumption	100	100	100	100	100	100
Own transport	8	38	—	88	21	1
Other consumption	92	62	100	12	79	99
Production	100	100	100	100	100	100
Agriculture, hunting, forestry, fishing	3	15	2	47	91	7
Mining and quarrying	3	2	—	1	—	1
Manufacturing						
Petroleum industry	1	7	—	11	—	
Chemical industry	2	14	27	6	2	16
Metal products and machinery industry	3	2	9	1	—	2
Other manufacturing	12	12	20	7	6	25
Public utilities	2	26	—	9	1	2
Transport and storage	6	8	6	12	1	5
Other services	68	14	36	6	–1	42

Source: de Haan (1997).
Note: a dash (—) indicates that the amount is nil.

22.71 The economic accounts for environmental transactions consist of environmental protection accounts and accounts for other environmentally related transactions, such as taxes, subsidies, investment grants, property income and the acquisition of emission and property rights.

22.72 For describing environmental protection, a functional approach combined with a kind of activity and product analysis is very useful. Environmental protection covers a wide range of economic activities and products. Examples are investment in clean technologies, restoring the environment after it has been polluted, recycling, the production of environmental goods and services, conservation and the management of natural assets and resources. A national aggregate of environmental protection expenditure can be defined to include ancillary activities and connected products.

22.73 In the environmental asset accounts, three different types of environmental assets are distinguished: natural resources; land and surface water; and ecosystems. Several of these environmental assets are not recorded in the central framework. This applies to environmental assets over which ownership right cannot be established. These include elements of the environment such as air, major water bodies and ecosystems that are so vast or uncontrollable that effective ownership rights cannot be enforced. Likewise, resources whose existence has not been clearly established by exploration and development such as speculative oil deposits, or that are currently inaccessible such as remote forests, are not considered assets in the central framework. The same is true for resources that have been established geologically or are readily accessible but that bring no current economic benefit because they cannot yet be profitably exploited.

22.74 Environmental asset accounts in physical and monetary terms describe the stocks of the various environmental assets and their changes. While such an account can be drawn up in monetary terms for some of the assets, for some others only physical accounts are possible. For ecosystems assets, it is unlikely that sufficient information is available to draw up stocks or changes during a year in exactly the same manner as for the other environmental assets. For these assets, it is more useful to concentrate on measuring changes in quality, most of which will relate to degradation, e.g. acidification of land and water and defoliation of timber.

22.75 The aggregates in the central framework can be modified to better account for the environmental issues. Three types of adjustments are commonly recommended: for depletion, for defensive expenditure by the government, and for degradation.

22.76 From an environmental point of view, the adjustment for depletion should be made because GDP and its growth rate do not make an allowance for the depletion of various environmental assets, such as oil and non-cultivated fish and forests. How to account for depletion is not straightforward, and many different options are available. One extreme option is to regard the whole use of such non-produced natural assets as depletion and therefore not as income from production. The other extreme option is to regard all the revenues from selling such assets as income contributing to domestic income. All the other options split the use of the assets into a component for depletion and a component for income. Different principles and different assumptions for life times and discount rates result in different figures for the adjustment for depletion.

22.77 Defensive expenditure on the environment does not consist only of environmental protection expenditure. It may be for the administration to establish and monitor fishing quotas or health expenditure related to atmospheric pollution or a nuclear disaster. An adjustment for defensive expenditure by the government is recommended in order to avoid them increasing GDP: they are intended to mitigate or undo negative environmental externalities of production or consumption not at all recorded in GDP. In terms of net domestic product, a solution can be to record all defensive expenditure by the government as capital formation and simultaneously as capital consumption. However, in terms of the more commonly used GDP, this makes no difference.

22.78 Domestic product, saving and other key aggregates can be adjusted for degradation, such as the impact of pollution in air and water. However, incorporating the effects of degradation is more difficult, less certain and more controversial than making adjustments to the accounts for either depletion or defensive expenditure. For example, how to account for damage to human health or for plants or animals growing more slowly, reproducing less and dying earlier because of environmental pollution? Should disasters be recorded as being the result of human economic activity and therefore be deducted from GDP?

Health accounts

22.79 The health accounts (see OECD, *A System of Health Accounts*, 2000) are an international framework for health data aimed at serving analysis and policy needs, national as well as European and international. The framework is designed for countries with a wide range of different models of organising their national health systems. The framework is a major tool for monitoring fast changing and increasingly complex health care systems. It measures and presents structural changes, such as shifts from in-patient to out-patient care and the emergence of multifunctional providers.

22.80 The health accounts provide answers to three basic questions:

(a) What kind of services and goods are purchased for health purposes?

(b) Who is the provider of these services and goods?

(c) What are the sources of funding?

22.81 Health care goods and services are split by function. Three categories are distinguished: personal health care services and goods; collective health care services; and health related functions.

22.82 The major types of personal health care services and goods distinguished are: services of curative care; services of rehabilitative care; services of long-term nursing care; ancillary services to health care; and medical goods dispensed to out-patients. For these personal services, a subdivision by mode of production is very useful: in-patient care, day care, out-patient care and home care. Also many other dimensions for classifying personal health care are important, such as by age, gender and income level for major categories of health care or by major disease groups, which is useful for cost of illness studies.

22.83 In comparison to the central framework, the production boundary is extended in two respects:

(a) occupational health care such as medical check-ups of employees or emergency health care services on or off business premises is not recorded as ancillary services;

(b) cash transfers to households for home care for the sick and disabled are treated as paid household production of health care; however, all such care with no link to cash transfers, are still excluded.

22.84 Two types of collective health services are distinguished:

(a) prevention and public health service;

(b) health administration and health insurance.

22.85 Seven types of health-related functions are distinguished:

(a) capital formation of health care provider institutions;

(b) education and training of health personnel;

(c) research and development in health;

(d) food, hygiene and drinking water control;

(e) environmental health;

(f) administration and provision of social services in kind to assist living with disease and impairment; and

(g) administration and provision of health-related cash-benefits.

22.86 For the providers of health care, a detailed industry classification has been developed; for this purpose, the International Standard Industrial Classification was refined and modified.

22.87 Basically, health care financing can be recorded from two different perspectives. The first perspective gives a breakdown of expenditure on health into the complex range of third-party-payment arrangements plus the direct payments by households or other direct funders such as government provided health care. The second perspective seeks the ultimate burden of financing born by source of finance. This implies that the sources of financing of intermediary sources of funding are traced back to their origin. Additional transfers such as intergovernmental transfers, tax deductions, subsidies to providers and financing by the rest of the world are included to complete the picture.

22.88 Simple overview tables showing the importance of health in the national economy can be derived from health accounts, as in Table 22.15.

Table 22.15 — Key-statistic on health

	% GDP			**% value change**			**% volume change**			**% price change**		
	year t	**year t+1**	**year t+2**	**year t**	**Year t+1**	**year t+2**	**year t**	**year t+1**	**year t+2**	**year t**	**year t+1**	**year t+2**
Expenditure on health care services												
Personal health expenditure												
curative care												
rehabilitative care												
long-term nursing care												
ancillary services to Health care medical goods												
Collectieve health expenditure												
Total												
population growth												
expenditure per capita												
Sources of finance												
Government and social security												
Private health Insurance												
Other												
Total												
GDP	100	100	100									
population growth												
GDP per capita												
	% of national total						% volume change			% wage rate change		
Employment i health care industries												

Household production accounts

22.89 In the central framework, household activities such as the services of owner-occupied dwellings; the production of agricultural production for own consumption; and own-account construction of dwellings; are recorded as production. However, two major types of household activity, unpaid services by household members consumed within the same household, and volunteer services, are not recorded as production. Even in the context of a satellite account, the issues of unpaid and voluntary household services raise difficult conceptual and measurement problems. They are an area of ongoing research. The purpose of a satellite account for household production[3] is to provide a complete picture of household production; to show income, consumption and saving of different types of households; and the interactions with the rest of the economy.

Major questions addressed are as follows:

(a) Which services are provided?

(b) Who is providing the services?

(c) What is the value of the services?

(d) What are the capital inputs and what happens to productivity?

(e) What are the implications for the size and distribution of income, consumption and saving over various types of households and over the life cycle?

(f) Are there shifts between paid and unpaid household services, due to structural economic and social developments, business cycle effects or government policy such as taxation issues or subsidies for paid child care?

22.90 Household production accounts may be of particular interest for the analysis of long-term economic developments and for the international comparison of levels of production, income and consumption. The major data sources used for compiling household production accounts are household budget surveys and time use surveys, and annual aggregates from these sources are distorted by sampling errors, which prevents the calculation of accurate annual growth rates. Household production accounts are therefore compiled on a regular but not annual basis, such as at five-yearly intervals and linked to an extensive time use survey.

22.91 Household production includes only services that can be delegated to someone other than the person benefiting from it, and this is known as the third party principle. As a consequence, personal care for oneself, studying, sleeping and leisure time activities are excluded.

22.92 For household production, different principal functions can be distinguished: housing, nutrition, clothing, care of children, adults and pets, and volunteer work which is by definition consumed in another household. For each of these principal functions, main or characteristic activities can be defined. This allows the allocation of expenditure or time use on such activities to those principal functions. However, some activities, like shopping, travel and household management, refer to various functions. As a consequence, the expenditure or time use of these activities is split over these functions.

22.93 In the central framework, expenditure on consumer durables are part of final consumption expenditure. However, in the household production accounts, expenditure such as expenditure on vehicles, refrigerators and equipment for construction and repair, is recorded as capital formation. The capital services of such assets are inputs to household production.

22.94 The output and value added of household production can be valued using an input or an output method. The output method is that household production is valued at market prices, i.e. at the price observed for similar services sold on the market. For the input method, valuing output as the sum of costs, the choice of valuation method for labour inputs is crucial. The possibilities include valuing wages including or excluding social security contributions, and different choices of reference group — average wages over all workers, wages of specialist workers or wages of housekeepers.

22.95 A major issue for household production accounts is the size and composition of household production and the links with the central framework. This is shown in the form of a use table as in Table 22.16.

[3] See e.g. Eurostat, ***Household Production and Consumption — Proposal for a Methodology of Household Satellite Accounts***, 2003; J. Varjonen and K. Aalto, ***Household Production and Consumption in Finland — Household Satellite Account***, Statistics Finland and the National Consumer Research Centre, 2006; S. Holloway, S. Short, S. Tamplin, ***Household Satellite Account***, ONS London, 2002; J.S. Landefeld and S.H. McCulla, ***Accounting for nonmarket household production within a national accounts framework***, Review of Income and Wealth, 2000.

Table 22.16 — A use table for household production

	Costs of production								Other producers	Total	Exports	Final consumption			Total	Gross capital formation	Total use at purchasers' prices
	Household production by function											HH	Government				
	Housing	Nutrition	Clothing	Care, children	Care, adults	Care, other	Volunteer	Total					Collective	Individual			
Products																	
SNA																	
Conceptual differences																	
Total																	
Compensation of employees																	
SNA																	
Conceptual differences																	
Other net taxes on production																	
Consumption of fixed capital																	
SNA																	
Conceptual differences																	
Operating surplus, net																	
Total																	
SNA																	
Conceptual differences																	
Supplementary information																	
Labour inputs																	
SNA																	
Conceptual differences																	

	Costs of production																
	Household production by function								Other producers	Total	Exports	Final consumption			Total	Gross capital formation	Total use at purchasers' prices
												HH	Government				
	Housing	Nutrition	Clothing	Care, children	Care, adults	Care, other	Volunteer	Total					Collective	Individual			
Gross fixed capital formation																	
SNA																	
Conceptual differences																	
Fixed capital stock, net																	
SNA																	
Conceptual differences																	

Labour accounts and SAM

22.96 In many countries, a wide range of labour market data are collected. Population and establishment censuses, household and enterprise surveys on the labour force, hours of work, earnings and labour costs, as well as registers of population, taxes and social security provide data for monitoring and analysing labour market developments on a regular basis. Despite the availability of a large amount of such statistical information, they do not provide a complete and reliable picture of the labour market. The major measurement problems are as follows:

(a) contradictory results between different data sources;

(b) many different concepts without a clear linkage;

(c) incomplete coverage;

(d) limitations in describing labour market dynamics;

(e) absence of links between labour market statistics and national accounts, demographic data, and other social and economic statistics such as education and social security.

A system of labour accounts can resolve such problems by combining all information on the labour market and showing the links with the major concepts and classifications of the labour market in the national accounts, such as the concepts of compensation of employees and classification by industry. A strong link with the national accounts improves the compilation of both national accounts and labour accounts, and is helpful in describing the relationship between the labour market and the rest of the economy.

22.97 A simple system of labour accounts is shown in Table 22.17. It exploits accounting identities between compensation of employees, hours worked, number of jobs, persons employed and the active and potential labour force. It is a simple system in that it shows a limited breakdown by socio-economic characteristics such as gender, but not age or level of education, and a simple breakdown by only three industries, with no cross-border workers.

22.98 A social accounting matrix (SAM) is a matrix presentation which shows the links between the supply and use tables and the institutional sector accounts. A SAM commonly provides additional information on the level and composition of employment, via a subdivision of compensation of employees and mixed income by type of person employed. This subdivision applies both to the use of labour by industry, as shown in the use tables, and the supply of labour by socio-economic subgroup, as shown in the allocation of primary income account for subsectors of the sector households. In this way, the supply and use of paid labour is shown systematically. A SAM can be thought of as an expanded system of labour accounts put in a matrix-format. Like the labour accounts and the national accounts, a SAM shows aggregates and allows analysis only in terms of aggregates and averages. Therefore, for many socio-economic analyses, the preferred models use an extended micro-database with information on socio-economic characteristics per person and household.

Table 22.17 — A simple system of labour accounts

	Hours worked by industry				Jobs, persons employed and labour force							
	Agriculture	Manufacturing	Services	Total hours worked	Hours per job	Number of jobs	Number of second jobs	Persons employed	Persons not employed	Active labour force	Not active labour force	Potential labour force
	(1)	(2)	(3)	(4) = 1 + 2 + 3	(5)	(6) = (4/5)	(7)	(8) = 6 - 7	(9)	(10) = 8 + 9	(11)	(12) = 10 + 11
Employees												
Male												
Female												
Self employed												
Male												
Female												
Total												
	Compensation of employees/mixed income											
Employees												
Male												
Female												
Self employed												
Male												
Female												
Total												
	Remuneration per hour worked											
Employees												
Male												
Female												
Self employed												
Male												
Female												
Total												

Productivity and growth accounts

22.99 A major use of the national accounts is to describe, monitor and analyse productivity growth (for an extended overview on productivity analysis, see OECD, *OECD Manual — Measuring Productivity: Measurement of Aggregate and Industry-level Productivity Growth*, 2001). Measuring and analysing productivity growth is used in understanding the major changes in industry structure and the rise in living standards during the past century in many countries. Measuring and analysing productivity growth is also used to form policies that stimulate productivity growth and raise prosperity, while also taking into account other policy considerations such as equity and environmental issues.

22.100 Economic growth in national accounts terms is the volume growth of GDP, and this can be decomposed into components including changes in labour productivity, the productivity per unit of labour, and changes in the volume of labour. The same breakdown can be made for the volume change of value added by industry. This simple approach provides a framework for monitoring and analysing economic growth by industry. More homogeneous figures on labour inputs obtained by using not just the number of employed, but full time equivalents or hours worked and distinguishing between various qualities of labour, will result in more detailed labour productivity figures.

22.101 This simple approach omits the role of other inputs, such as capital services and intermediate products. This can be very misleading. For example, labour productivity may apparently increase substantially due to much higher capital intensity but may also increase due to efficiency gains while using the same amount of capital. By also accounting for other inputs, multifactor productivity is measured and the sources of productivity growth can be better understood. Measuring multifactor productivity amounts to decomposing the change in the volume of output into changes in the various volumes of all inputs plus a residual: multifactor productivity growth. Multifactor productivity growth reflects all that is not explained by the various inputs, i.e. the role of other inputs. However, it may also reflect measurement errors in the outputs or inputs.

22.102 The volume of capital input from the fixed capital stock can be measured in various ways. There are three crucial choices to be made:

(a) the form of the age-efficiency or age-price function for each type of asset; common options are straight-line, geometric or hyperbolic;

(b) the nature of the weights that are used to aggregate across different types of assets: user cost weights or market prices;

(c) the index number formula by which this aggregation takes place. Options are a base weighted index number such as Laspeyres, or a mixed weighted index number such as Fisher and Törnqvist.

22.103 Multifactor productivity measurement helps to identify the direct growth contributions of labour, capital, intermediate inputs and multifactor productivity change. It is used in reviewing past growth patterns and for assessing the potential for future economic growth. However, for analysis and policy, in interpreting multifactor productivity measures, the following must be considered.

(a) Not all technical changes translate into multifactor productivity growth. Embodied technological change may be accounted for via the volumes of capital and intermediate inputs. Embodied technological change represents advances in the design and quality of new vintages of capital and intermediate inputs and its effects are attributed to the respective factors as long as the factor is remunerated accordingly. In contrast, disembodied technical change is considered to be 'costless', for example in the form of general knowledge, blueprints, network effects or spillovers from other factors of production including better management and organisational change. Such technical change ends up by definition in the residual, i.e. multifactor productivity growth.

(b) Multifactor productivity growth is not necessarily caused by technological change: other non-technology factors will also be picked up by the residual. This includes adjustment costs, scale effects, business cycle effects, pure changes in efficiency and measurement errors.

(c) Multifactor productivity growth is a static measure and fails to explicitly measures feedback effects between productivity change and capital, e.g. extra output per person may lead to additional savings and investment and to a rise in the capital-labour ratio. As a consequence, it tends to understate the eventual importance of productivity change in stimulating the growth of output.

(d) Multifactor productivity measurement helps to identify the relative importance of different sources of productivity growth. However, it has to be complemented by institutional, historical and case studies to explore the underlying causes of growth, innovation and productivity change.

22.104 For better measuring, analysing and monitoring growth and productivity, KLEMS growth and productivity accounts have been developed all over the world. A key objective is to move beneath the aggregate economy level and examine the productivity performance of individual industries and their contributions to economic growth. In order to reveal the enormous heterogeneity in output and productivity growth across industries, many different industries are distinguished and, in the Union, EU-KLEMS distinguishes 72. The accounts include quantities and prices of output, capital (K), labour (L), energy (E), material (M) and services (S) inputs at the industry level. Output and productivity measures are provided in terms of growth rates and relative levels. Additional measures on knowledge creation such as R&D, patents, embodied technological change, other innovation activity and cooperation are under development. Such measures are developed for individual Member States, and linked with KLEMS databases across the rest of the world.

22.105 The accounts consist of three interdependent modules: an analytical module and two statistical modules.

22.106 The analytical module provides a research database for use in the academic world and by policymakers. It uses 'best practice' techniques in growth accounting, focuses on international comparability, and aims at achieving full coverage in terms of number of countries, industries and variables. It can also adopt alternative or pioneering assumptions with regard to statistical conventions, such as how to treat ICT goods, non-market services and the measurement of capital services.

22.107 The statistical modules of the database are developed in parallel with the analytical module. They include data which are broadly consistent with those published by national statistical institutes. Its methods correspond to those in the central framework of the national accounts, e.g. supply and use tables are used as the coordinating framework for productivity analysis and chain indices are applied. The statistical module includes not only national accounts data, but also supplementary information, such as employment statistics on the quantity (persons and working hours) and quality (distribution of quantities by age, gender and education level) of labour input per industry.

Research and development accounts

22.108 In the central framework, research and development expenditure is treated as intermediate consumption, i.e. as current expenditure benefiting production for the current period only. This runs counter to the nature of R&D, the aim of which is to improve production for future periods. In order to resolve the conceptual and practical issues of recording R&D as capital formation, R&D satellite tables recognising R&D as capital formation will be drawn up by Members States. This will enable Member States to develop robust and comparable methods and estimates. In a second stage, when a sufficiently high level of reliability and comparability has been achieved, R&D will be capitalised in the core accounts of the Member States.

22.109 In addition to this supplementary experimental table, a set of R&D accounts can be drawn up. The purpose of such R&D accounts is to show the role of R&D in the national economy. Questions answered include the following:

(a) Who is producing R&D?

(b) Who is financing R&D?

(c) Who is using R&D?

(d) What is the value of R&D assets in comparison to the various other assets?

(e) What are the consequences for productivity and economic growth?

A supply and use table provides an overview of who is producing and using R&D, and this is shown in Tables 22.18 and 22.19.

Table 22.18 — The supply of R&D

	Manufacture of chemical products	Manufacture of ICT hardware	R&D industry	University Education	Public adminis-tration	Other indus-tries	Total	Imports	Total supply at basic prices	Trade and transport margins	Taxes on products	Subsidies on products (—)	Total supply at purchasers' prices
Market R&D													
Own-account R&D													
Non-market R&D													
Other products													
Total													

Table 22.19 — The use of R&D

	Costs of production by Industry							Exports	Capital formation	Total use at purchasers' prices
	Manufacture of chemical products	Manufacture of ICT hardware	R&D industry	University Education	Public administration	Other Industries	Total			
Market R&D										
Own-account R&D										
Non-market R&D										
Other products										
Total										
Compensation of employees										
Other net taxes on production										
Consumption of fixed capital										
R&D										
Other										
Operating surplus, net										
Total										
Supplementary information										
Labour inputs										

	Costs of production by Industry							Exports	Capital formation	Total use at purchasers' prices
	Manufacture of chemical products	Manufacture of ICT hardware	R&D industry	University Education	Public administration	Other Industries	Total			
Gross (fixed) capital formation										
R&D										
Other										
(Fixed) capital stock, net										
R&D										
Other										

Social protection accounts

22.110 Social protection and its interaction with issues such as ageing, health care and social exclusion is a major issue for national and European economic and social policy. For monitoring, forecasting, analysing, and discussing social protection issues, detailed, comparable and up-to-date information on the organisation, current standing and developments of social protection in the Member States and beyond is required.

22.111 Social protection benefits are transfers to households or individuals, in cash or kind intended to relieve them from a number of risks or needs. The risks or needs of social protection refer to the functions: disability, sickness/health care, old age, survivors, family/children, unemployment, housing and social exclusion not elsewhere classified. In principle, education is not included as a risk or need unless it is a support to indigent families with children.

22.112 Social protection benefits are made through social protection schemes. These are administered and organised by public or private bodies, such as social security funds, government agencies, insurance companies, public or private employers and private welfare and social assistances institutions. The schemes do not necessarily refer to specific institutions, regulations or laws; although they do in many cases. All schemes that are solely based on individual arrangements or where simultaneous reciprocal agreements exist are not regarded as social protection.

22.113 Where the reciprocal arrangement from the employee is not simultaneous, the expenditure is classified as social protection. This applies to retirement and survivors' pensions paid by an employer and free housing offered to retired employees. The continued payment of wages and salaries, while an employee is unable to work during sickness, maternity, disability, redundancy and so on, is regarded as social protection benefits provided by the employer.

22.114 Government-controlled schemes are where the government takes all the principal decisions about the level of benefits, the terms on which they are paid and the ways in which the scheme is financed. Government-controlled social protection is usually established by law or regulation. It includes schemes that provide social protection to public servants on the same lines as that provided to the general population by government-controlled schemes. However, it excludes schemes that government may set up in its role of employer without government-controlled counterparts in the private sector.

22.115 Examples of government-controlled schemes are as follows:

(a) non-contributory schemes set up by government to meet its general social responsibility, such as an income support scheme for destitute people or a rent benefit scheme;

(b) schemes run by social security funds;

(c) schemes originally established in the private sector and for which the government has later assumed responsibility.

22.116 Examples of non-government-controlled schemes are as follows:

(a) schemes run by non-profit institutions, like mutual benefits societies, friendly societies and institutions co-administered by the social partners;

(b) schemes administered by commercial insurance companies;

(c) non-autonomous schemes run by employers; this covers both funded schemes where there are separate reserves in the balance sheet to cover the liability to pay benefits in the future, and unfunded schemes with no such separate reserves.

22.117 Using information on specific individual schemes, the accounts for social protection provide a multi-dimensional overview of social protection, as described in *The European System of integrated Social PROtection Statistics (ESSPROS)*, (Eurostat, 2008). The accounts describe the size and composition of social protection benefits, their financing and the administrative costs involved. Social protection benefits are classified by function such as sickness and old age, by type such as in cash and in kind, and whether they are means tested. Underlying schemes are classified according to whether they are government-controlled schemes or not, or whether they are basic versus supplementary schemes.

22.118 For each individual social protection scheme, information is provided on revenue and expenditure and a whole range of qualitative information, such as the scope, financing, history and major modifications over time.

22.119 The standard information on the various individual social protection schemes is known as the core social protection system, and is supplemented by various modules. Possible modules are as follows:

(a) a module covering the number of pension beneficiaries;

(b) a module on net social protection benefits. This covers the influence of taxes and social contributions paid on benefits by beneficiaries and the extent to which social benefits are provided in the form of tax rebates or tax reductions.

22.120 The concepts and classifications in the accounts for social protection are closely linked to those in the central framework. The major difference between social protection benefits and social benefits in the central framework is that the latter cover also expenditure on education; another difference is that social protection benefits may include capital transfers with a social purpose. A simple overview table as given in Table 22.20 shows these links and at the same time provides an overview of the size and composition of social protection benefits in a country.

Table 22.20 — Overview of social (protection) benefits by social risk/need and transaction

	Sickness	Disability	Old age	Survivors	Children/ Family	Employment/ Unemployment	Housing	Social Exclusion n. e. c.	Total social protection benefits	Education	social benefits national accounts
Government-controlled schemes											
Social security benefits											
in cash											
in kind											
Social assistance benefits											
in cash											
in kind via market producers											
in kind as other non-market output											
Other social protection benefits (e.g. capital transfers by the government)											Empty by definition
Total government-controlled social protection benefits											
Non-government controlled schemes											
Pension benefits (funded)											
Other private social insurance benefits											
Unfunded employee social benefits (including those by the government)											
Social assistance benefits in kind by NPISH											
Other social protection benefits											Empty by definition
Total other social protection benefits											
Total social protection benefits											

22.121 The close linkage between standard national accounts statistics and social protection statistics provides opportunities for both types of statistics. From the point of view of social protection statistics, they can be related to the official statistics on the national economy such as on economic growth and public finance. National accounts statistics broken down by social protection scheme can also serve as a check on the completeness and reliability of social protection statistics. The compilation processes of both statistics can also be linked, saving compilation costs, increasing reliability and providing new opportunities, such as making social protection statistics as timely as national accounts statistics[4]. Similar advantages apply to the national accounts. The accounts for social protection are relatively easy to derive from the sector accounts and the table on government expenditure by COFOG function and are used in forming economic and social policy. Furthermore, they serve as a check on the reliability and completeness of the standard national accounts figures, such as social benefits and contributions.

22.122 The OECD also publishes data on social expenditure by individual scheme, in the Social Expenditure Database, SOCX. It collects the data for non-EU countries, while Eurostat provides the OECD with the data on the social protection expenditure for the Member States. A specific feature of the OECD work on social expenditure is its focus on international comparison of net social expenditure; this includes an adjustment for the impact on household consumption of differences in taxes on production and imports.

Tourism satellite accounts

22.123 The tourism satellite account[5] provides an overview of the supply and use of goods and services for the various types of tourism and their importance for domestic employment, balance of payments, government finance and personal and business income.

22.124 'Tourism' comprises the activities of persons travelling to and staying in places outside their usual environment for less than a year and for a main purpose other than to be employed by a resident entity in the place visited. Such activities encompass all that visitors do for a trip or while on a trip. 'Tourism' is not restricted to typical tourism activities such as sightseeing, sunbathing and visiting sites. Travelling for the purpose of conducting business and for education and training can also be part of tourism.

22.125 The demand generated by tourism covers a variety of goods and services, in which transportation, accommodation and food services figure prominently. In order to obtain international comparability, tourism characteristic products are defined as products which, in the absence of visitors, in most countries would probably not exist in meaningful quantities or for which the level of consumption would be significantly reduced, and for which it seems possible to obtain statistical information. Tourism-connected products are a residual category, including those that have been identified as tourism-specific in a given country but for which this attribute has not been acknowledged on a worldwide basis.

22.126 Some of the services for tourism purposes, such as accommodation in second homes or transportation in individual motor vehicles, can be produced in significant amounts on own account. However, in the central framework, unlike own-account housing services, transportation services produced within households for their own benefit are not regarded as production. It is recommended to follow that convention in the tourism satellite account. But for countries in which own-account transportation services are significant, they can show them separately in the tourism satellite account.

22.127 The key measure for describing the demand for tourism is visitor consumption by households, government, non-profit institutions serving households and business. It consists of the following components:

(a) visitor final consumption expenditure in cash;

(b) visitor final consumption expenditure in kind, such as own-account housing services;

[4] The ESSPROS dissemination timetable is defined in Regulation (EC) No 458/2007 of the European Parliament and of the Council of 25 April 2007 on the European system of integrated social protection statistics (ESSPROS) (OJ L 113, 30.4.2007, p. 3).

[5] See Eurostat, OECD, UNSD, UNWTO, *Tourism Satellite Account: Recommended Methodological Framework*, 2008.

(c) tourism social transfers in kind such as individual non-market services absorbed by visitors, including health services of a spa and the non-market services of a museum;

(d) tourism business expenses. This includes tourism expenses classified as intermediate consumption and does not include other expenses corresponding to employees on business trips paid by businesses, such as payments for meals treated as remuneration in kind. As a consequence, tourism business expenses do not represent total consumption of visitors on business trips;

(e) in addition, in order to underline the economic importance of the actions undertaken by public authorities to create a favourable environment for the development of tourism, specific measurement of the aggregate value of tourism collective consumption is suggested. This refers to activities such as the promotion of tourism by a government unit, the maintenance of order and security and the maintenance of public space.

22.128 The supply and use of goods and services for tourism purposes, as well as value added and employment generated by tourism, can be shown in a supply and use table distinguishing its characteristic products and industries and the tourism-connected products.

22.129 In their tourism satellite account, countries can further disaggregate and typify their markets, based on duration of stay, purpose of the visit, features of the visitors such as whether they are international or domestic visitors.

CHAPTER 23

Classifications

Introduction

23.01 The classifications in the ESA 2010 are fully in line with the new coding of the 2008 SNA, the NACE Rev. 2, the CPA 2008 (at the levels of aggregation used in the transmission programme), COFOG, Coicop, COPNI and COPP. Only a very limited number of additional codes have been introduced.

23.02 The accounts are built around a small number of conceptual elements, in particular sectors, transactions and classifications of the items subject to transactions and other flows, especially assets and liabilities. For each of these elements, a hierarchical classification exists. Accounts can be compiled at greater or lesser degrees of detail by using higher or lower levels of these hierarchies.

23.03 The entries in the accounts are divided into types designated by one or two letters as follows:

(a) S codes relating to sectors;

(b) P codes relating to transactions in products;

(c) NP codes relating to transactions in non-financial non-produced assets;

(d) D codes relating to distributive transactions;

(e) F codes relating to transactions in financial assets and liabilities;

(f) K codes relating to other changes in assets;

(g) B codes relating to balancing and net worth items;

(h) L codes relating to balance sheet entries;

(i) AN codes relating to non-financial assets (both produced and non-produced);

(j) AF codes relating to stocks of financial assets and liabilities.

23.04 In the context of a production approach of GDP, tables by industry and the input-output framework, use is also made of two European classifications: NACE Rev. 2 for economic activities and CPA 2008 for products by economic activities. NACE Rev. 2 is the European version of ISIC Rev. 4. Also, for an expenditure approach of GDP, CPA 2008, COFOG (classification of expenditure according to purpose: classification of the functions of government) and Coicop (classification of individual consumption according to purpose) are used; the latter two classifications are established by UN.

23.05 Apart from COFOC and Coicop, the functional classifications include also COPNI (classification of the purposes of non-profit institutions serving households) and COPP (classification of outlays of producers by purpose). These classifications are used for functional analysis of the expenditure by corporations, government, households and non-profit institutions serving households and for functional satellite accounts.

Classification of institutional sectors (S)

S.1	Total economy[1]
S.11	Non-financial corporations
S.11001	Public non-financial corporations
S.11002	National private non-financial corporations
S.11003	Foreign controlled non-financial corporations

S.12	Financial corporations
S.121	Central bank[2] (public)
S.122	Deposit-taking corporations except the central bank[2]
S.12201	Public
S.12202	National private
S.12203	Foreign controlled
S.123	Money market funds
S.12301	Public
S.12302	National private
S.12303	Foreign controlled
S.124	Non-MMF investment funds
S.12401	Public
S.12402	National private
S.12403	Foreign controlled
S.125	Other financial intermediaries, except insurance corporations and pension funds
S.12501	Public
S.12502	National private
S.12503	Foreign controlled
S.126	Financial auxiliaries
S.12601	Public
S.12602	National private
S.12603	Foreign controlled
S.127	Captive financial institutions and money lenders
S.12701	Public
S.12702	National private
S.12703	Foreign controlled
S.128	Insurance corporations[3]
S.12801	Public
S.12802	National private
S.12803	Foreign controlled
S.129	Pension funds[3]
S.12901	Public
S.12902	National private
S.12903	Foreign controlled
S.121 + S.122 + S.123	Monetary financial institutions
S.13	General government
S.1311	Central government (excluding social security funds)
S.1312	State government (excluding social security funds)
S.1313	Local government (excluding social security funds)
S.1314	Social security funds
S.14	Households

S.141	Employers
S.142	Own-account workers
S.143	Employees
S.144	Recipients of property and transfer income
S.1441	Recipients of property income
S.1442	Recipients of pensions
S.1443	Recipients of other transfers
S.15	Non-profit institutions serving households
S.15002	National private
S.15003	Foreign controlled
S.2	Rest of the world
S.21	Member States and institutions and bodies of the European Union
S.211	Member States of the European Union
S.2111	Member States of the euro area
S.2112	Member States outside the euro area
S.212	Institutions and bodies of the European Union
S.2121	The European Central Bank (ECB)
S.2122	European institutions and bodies, except the ECB
S.22	Non-member countries and international organisations non-resident in the European Union

[1] For all codes in sectors S.11 and S.12, the fifth digit 1/2/3 refers to public/national private/foreign controlled.

[2] Central bank (S.121) plus deposit-taking corporations except the central bank (S.122) correspond to S.12B.

[3] Insurance corporations (S.128) plus pension funds (S.129) correspond to S.12I.

Classification of transactions and other flows

Transactions in products (P)

P.1	Output
P.11	Market output
P.119	Financial intermediation services indirectly measured (FISIM)
P.12	Output for own final use
P.13	Non-market output
P.2	Intermediate consumption
P.3	Final consumption expenditure
P.31	Individual consumption expenditure
P.32	Collective consumption expenditure
P.4	Actual final consumption
P.41	Actual individual consumption
P.42	Actual collective consumption

P.5	Gross capital formation/P.5n net capital formation
P.51g	Gross fixed capital formation
P.511	Acquisitions less disposals of fixed assets
P.5111	Acquisitions of new fixed assets
P.5112	Acquisitions of existing fixed assets
P.5113	Disposals of existing fixed assets
P.512	Costs of ownership transfer on non-produced assets
P.51c	Consumption of fixed capital (–)
P.51c1	Consumption of fixed capital on gross operating surplus (–)
P.51c2	Consumption of fixed capital on gross mixed income (–)
P.51n	Net fixed capital formation
P.52	Changes in inventories
P.53	Acquisitions less disposals of valuables
P.6	Exports of goods and services
P.61	Exports of goods
P.62	Exports of services
P.7	Imports of goods and services
P.71	Imports of goods
P.72	Imports of services

Transactions in non-produced non-financial assets (NP codes)

The codes used for transactions in non-produced non-financial assets can be further disaggregated if desired by appending the classification of non-produced non-financial assets, AN.2.

NP	Acquisitions less disposals of non-produced assets
NP.1	Acquisitions less disposals of natural resources
NP.2	Acquisitions less disposals of contracts, leases and licences
NP.3	Purchases less sales of goodwill and marketing assets

Distributive transactions (D)

D.1	Compensation of employees
D.11	Wages and salaries
D.12	Employers' social contributions
D.121	Employers' actual social contributions
D.1211	Employers' actual pension contributions
D.1212	Employers' actual non-pension contributions

D.122	Employers' imputed social contributions
D.1221	Employers' imputed pension contributions
D.1222	Employers' imputed non-pension contributions
D.2	Taxes on production and imports
D.21	Taxes on products
D.211	Value added type taxes (VAT)
D.212	Taxes and duties on imports excluding VAT
D.2121	Import duties
D.2122	Taxes on imports excluding VAT and duties
D.214	Taxes on products except VAT and import taxes
D.29	Other taxes on production
D.3	Subsidies
D.31	Subsidies on products
D.311	Import subsidies
D.319	Other subsidies on products
D.39	Other subsidies on production
D.4	Property income
D.41	Interest
D.42	Distributed income of corporations
D.421	Dividends
D.422	Withdrawals from income of quasi-corporations
D.43	Reinvested earnings on foreign direct investment
D.44	Other investment income
D.441	Investment income attributable to insurance policy holders
D.442	Investment income payable on pension entitlements
D.443	Investment income attributable to collective investment fund shareholders
D.4431	Dividends attributable to collective investment fund shareholders
D.4432	Retained earnings attributable to collective investment fund shareholders
D.45	Rent

Current transfers in cash and kind (D.5-D.8)

D.5	Current taxes on income, wealth, etc.
D.51	Taxes on income
D.59	Other current taxes
D.6	Social contributions and benefits
D.61	Net social contributions
D.611	Employers' actual social contributions
D.6111	Employers' actual pension contributions
D.6112	Employers' actual non-pension contributions
D.612	Employers' imputed social contributions

D.6121	Employers' imputed pension contributions
D.6122	Employers' imputed non-pension contributions
D.613	Households' actual social contributions
D.6131	Households' actual pension contributions
D.6132	Households' actual non-pension contributions
D.614	Households' social contribution supplements
D.6141	Households' pension contribution supplements
D.6142	Households' non-pension contribution supplements
D.61SC	Social insurance scheme service charges (–)[1]
D.62	Social benefits other than social transfers in kind
D.621	Social security benefits in cash
D.6211	Social security pension benefits in cash
D.6212	Social security non-pension benefits in cash
D.622	Other social insurance benefits
D.6221	Other social insurance pension benefits
D.6222	Other social insurance non-pension benefits
D.623	Social assistance benefits in cash
D.63	Social transfers in kind
D.631	Social transfers in kind — non-market production
D.632	Social transfers in kind — purchased market production
D.7	Other current transfers
D.71	Net non-life insurance premiums
D.711	Net non-life direct insurance premiums
D.712	Net non-life reinsurance premiums
D.72	Non-life insurance claims
D.721	Non-life direct insurance claims
D.722	Non-life reinsurance claims
D.73	Current transfers within general government
D.74	Current international cooperation
D.75	Miscellaneous current transfers
D.751	Current transfers to NPISHs
D.752	Current transfers between households
D.759	Other miscellaneous current transfers
D.76	VAT- and GNI-based EU own resources
D.8	Adjustment for the change in pension entitlements
D.9	Capital transfers
D.9r	Capital transfers, receivable
D.91r	Capital taxes, receivable
D.92r	Investment grants, receivable
D.99r	Other capital transfers, receivable
D.9p	Capital transfers, payable

D.91p	Capital taxes, payable
D.92p	Investment grants, payable
D.99p	Other capital transfers, payable

[1] Employers' contributions appear in both the generation of income account and allocation of primary income account as payable by employers and receivable by employees. In the secondary distribution of income account, these amounts are payable by households and receivable by those administering social insurance schemes. In order to show exactly the same value in each case, the deduction of the charge that represents part of the output of the schemes and final consumption of the beneficiary households is also shown in the secondary distribution of income account as a separate item. The social insurance scheme service charges item (D.61SC) is thus an adjustment item only and not a distributive transaction in itself.

Transactions in financial assets and liabilities (F)

(Net acquisition of financial assets/net incurrence of liabilities)

F.1	Monetary gold and SDRs
F.11	Monetary gold
F.12	SDRs
F.2	Currency and deposits
F.21	Currency
F.22	Transferable deposits
F.221	Inter-bank positions
F.229	Other transferable deposits
F.29	Other deposits
F.3	Debt securities
F.31	Short-term
F.32	Long-term
F.4	Loans[1]
F.41	Short-term
F.42	Long-term
F.5	Equity and investment fund shares/units
F.51	Equity
F.511	Listed shares
F.512	Unlisted shares
F.519	Other equity
F.52	Investment fund shares/units
F.521	Money Market Fund shares/units
F.522	Non-MMF investment fund shares/units
F.6	Insurance, pension and standardised guarantee schemes
F.61	Non-life insurance technical reserves
F.62	Life insurance and annuity entitlements
F.63	Pension entitlements
F.64	Claims of pension funds on pension managers

F.65	Entitlements to non-pension benefits
F.66	Provisions for calls under standardised guarantees
F.7	Financial derivatives and employee stock options
F.71	Financial derivatives
F.711	Options
F.712	Forwards
F.72	Employee stock options
F.8	Other accounts receivable/payable
F.81	Trade credits and advances
F.89	Other accounts receivable/payable, excluding trade credits and advances

[1] Memo item: foreign direct investment (add code FDI).

Other changes in assets (K)

K.1-5	Total changes in volume
K.1	Economic appearance of assets
K.2	Economic disappearance of non-produced assets
K.21	Depletion of natural resources
K.22	Other economic disappearance of non-produced assets
K.3	Catastrophic losses
K.4	Uncompensated seizures
K.5	Other changes in volume n.e.c.
K.6	Changes in classification
K.61	Changes in sector classification and structure
K.62	Changes in classification of assets and liabilities
K.7	Nominal holding gains and losses
K.71	Neutral holding gains and losses
K.72	Real holding gains and losses

Classification of balancing items and net worth (B)[1]

B.1g	Value added, gross/Gross domestic product
B.2g	Operating surplus, gross
B.3g	Mixed income, gross
B.4g	Entrepreneurial income, gross
B.5g	Balance of primary incomes, gross/National income, gross
B.6g	Disposable income, gross
B.7g	Adjusted disposable income, gross
B.8g	Saving, gross

B.9	Net lending (+)/net borrowing (–)
B.9N	Net lending (+)/net borrowing (–) of the non-financial accounts
B.9F	Net lending (+)/net borrowing (–) of the financial accounts
B.10	Changes in net worth
B.101	Changes in net worth due to saving and capital transfers[2, 3]
B.102	Changes in net worth due to other changes in volume of assets
B.103	Changes in net worth due to nominal holding gains and losses
B.1031	Changes in net worth due to neutral holding gains and losses
B.1032	Changes in net worth due to real holding gains and losses
B.11	External balance of goods and services
B.12	Current external balance
B.90	Net worth
BF.90	Financial net worth

1 All balancing items can be measured gross or net of consumption of fixed capital. The code for gross balancing items is constituted of the code of the item plus the letter 'g'. Similarly, the letter 'n' attached to a code indicates the net value.

2 This is not a balancing item in the structure of the accounting system. It is the total of the right-hand side of the capital account. However, as a significant component of changes in net worth, it is coded with the other components of the latter.

3 For the rest of the world, this refers to changes in net worth due to current external balance and capital transfers.

Classification of balance sheet entries (L)

For a single balance sheet, as for the financial account, the only codes necessary are those giving the details of assets by type, using AN and AF codes. However, an account can be drawn up showing the stock levels at the start (LS) and end (LE) of a period, and the total changes between them (LX). All three codes need to be qualified by asset types. The LX entries are the sum of the entries of P.5, NP, F and K codes for the assets in question for the period covered.

From the entries in the opening balance sheet a value of net worth (B.90) can be calculated. The difference between this and the value of B.90 in the closing balance sheet must be equal to the balance of all the LX codes, which must also be equal to the value for B.10.

LS	Opening balance sheet
LX	Changes in balance sheet
LE	Closing balance sheet

Classification of assets (A)

Non-financial assets (AN)

AN.1	Produced non-financial assets
AN.11	Fixed assets by type of asset
AN.111	Dwellings
AN.112	Other buildings and structures
AN.1121	Buildings other than dwellings
AN.1122	Other structures

AN.1123	Land improvements
AN.113	Machinery and equipment
AN.1131	Transport equipment
AN.1132	ICT equipment
AN.1139	Other machinery and equipment
AN.114	Weapons systems
AN.115	Cultivated biological resources
AN.1151	Animal resources yielding repeat products
AN.1152	Tree, crop and plant resources yielding repeat products
(AN.116)	(Costs of ownership transfer on non-produced assets)[1]
AN.117	Intellectual property products
AN.1171	Research and development
AN.1172	Mineral exploration and evaluation
AN.1173	Computer software and databases
AN.11731	Computer software
AN.11732	Databases
AN.1174	Entertainment, literary or artistic originals
AN.1179	Other intellectual property products
AN.12	Inventories by type of inventory
AN.121	Materials and supplies
AN.122	Work-in-progress
AN.1221	Work-in-progress on cultivated biological assets
AN.1222	Other work-in-progress
AN.123	Finished goods
AN.124	Military inventories
AN.125	Goods for resale
AN.13	Valuables
AN.131	Precious metals and stones
AN.132	Antiques and other art objects
AN.133	Other valuables
AN.2	Non-produced non-financial assets
AN.21	Natural resources
AN.211	Land
AN.2111	Land underlying buildings and structures
AN.2112	Land under cultivation
AN.2113	Recreational land and associated surface water
AN.2119	Other land and associated surface water
AN.212	Mineral and energy reserves
AN.213	Non-cultivated biological resources
AN.214	Water resources
AN.215	Other natural resources

AN.2151	Radio spectra
AN.2159	Other
AN.22	Contracts, leases and licences
AN.221	Marketable operating leases
AN.222	Permits to use natural resources
AN.223	Permits to undertake specific activities
AN.224	Entitlement to future goods and services on an exclusive basis
AN.23	Purchases less sales of goodwill and marketing assets

[1] Costs of ownership transfer on non-produced assets (AN.116) are treated as part of fixed capital formation, that is the acquisition of fixed assets. However, when stock levels are itemised, the value of these costs of ownership transfer is included with the non-produced assets to which they refer and so are not shown separately as part of AN.11. In the case of land transferring, the costs of ownership transfer on all land are to be included with land improvements (AN.1123). The item AN.116 is included in the full list, shown below, for presentation purposes only.

Financial assets (AF)

There is a one-to-one match between the codes shown for transactions in financial assets and liabilities (F codes) and those for stock levels or positions (AF codes) for the same assets and liabilities. In practice, though, balance sheet data may be less detailed and not exist beyond the first-level breakdown, shown below. If desired, the AF codes can be disaggregated in line with the detail provided for F codes, as follows:

AF.1	Monetary gold and SDRs
AF.11	Monetary gold
AF.12	SDRs
AF.2	Currency and deposits
AF.21	Currency
AF.22	Transferable deposits
AF.221	Inter-bank positions
AF.229	Other transferable deposits
AF.29	Other deposits
AF.3	Debt securities
AF.31	Short-term
AF.32	Long-term
AF.4	Loans[1]
AF.41	Short-term
AF.42	Long-term
AF.5	Equity and investment fund shares/units
AF.51	Equity
AF.511	Listed shares
AF.512	Unlisted shares
AF.519	Other equity
AF.52	Investment fund shares/units
AF.521	Money Market Fund shares/units
AF.522	Non-MMF investment fund shares/units
AF.6	Insurance, pension and standardised guarantee schemes

AF.61	Non-life insurance technical reserves
AF.62	Life insurance and annuity entitlements
AF.63	Pension entitlements
AF.64	Claims of pension funds on pension managers
AF.65	Entitlements to non-pension benefits
AF.66	Provisions for calls under standardised guarantees
AF.7	Financial derivatives and employee stock options
AF.71	Financial derivatives
F.711	Options
F.712	Forwards
AF.72	Employee stock options
AF.8	Other accounts receivable/payable
AF.81	Trade credits and advances
AF.89	Other accounts receivable/payable, excluding trade credits and advances

[1] Memo item: foreign direct investment (add code FDI).

Classification of supplementary items

The general convention is that a supplementary code begins with X and is linked to the code of a standard item by building on the code of that item.

Non-performing loans

The following codes apply to stocks and flows of non-performing loans. Since loans have the code AF.4 and F.4, the supplementary codes begin XAF4 for stocks and XF4 for flows.

The codes for stocks are:

XAF4_NNP	Loans: nominal value, non-performing
XAF4_MNP	Loans: market value, non-performing

and the associated flows:

XF4_NNP	Loans: nominal value, non-performing
XF4_MNP	Loans: market value, non-performing

In both sets of codes, the underscore is a placeholder for the detailed codes for loans where relevant, for example, on the balance sheet:

XAF41NNP	Short-term loans: nominal value, non-performing
XAF42MNP	Long-term loans: market value, non-performing

Capital services

The following codes apply to capital services.

XCS	Capital services
XCSC	Capital services — Corporations
P.51c1	Consumption of fixed capital on gross operating surplus
XRC	Return to capital — Corporations
XOC	Other costs of capital — Corporations
XCSU	Capital services — Unincorporated enterprises
P.51c2	Consumption of fixed capital on gross mixed income
XRU	Return to capital — Unincorporated enterprises
XOU	Other costs of capital — Unincorporated enterprises

Pensions table

The following codes apply to the supplementary table described in the chapter on pensions. Different codes are proposed for the columns and rows of the table.

Columns

In the Column description the letter 'W' corresponds to 'non-government' and the numbers in these codes refer to the corresponding institutional sectors.

(a) Liabilities recorded in the main sequence of accounts

Schemes where responsibility for the design and implementation lies outside general government	
XPC1W	Defined contribution schemes
XPB1W	Defined benefit schemes
XPCB1W	Total

Schemes where responsibility for the design and implementation lies within general government	
XPCG	Defined contribution schemes

General government employee defined benefit schemes	
XPBG12	In the financial corporations sector
XPBG13	In the general government sector

(b) Liabilities not recorded in the main sequence of accounts

XPBOUT13	In the general government sector
XP1314	Social security pension schemes
XPTOT	Total pension schemes
XPTOTNRH	of which: non-resident households

Rows

	(a) Opening balance sheet
XAF63LS	Pension entitlements

	(b) Transactions
XD61p	Special contributions relating to pension schemes
XD6111	Employer actual social contributions
XD6121	Employer imputed social contributions
XD6131	Household actual social contributions
XD6141	Household social contribution supplements
XD619	Other (actuarial) accumulation of pension entitlements in social security funds
XD62p	Pension benefits
XD8	Adjustment for the change in pension entitlements
XD81	Change in pension entitlements due to transfers of entitlements
XD82	Change in entitlements due to negotiated changes in scheme structure

	(c) Other economic flows
XK7	Revaluations
XK5	Other changes in volume

	(d) Closing balance sheet
XAF63LE	Pension entitlements

	(e) Related indicators
XP1	Output
XAFN	Assets held by pension schemes at end-year

Consumer durables

Consumer durables are coded using X as a prefix plus DHHCE (durable household consumption expenditure) plus a one-digit affix for subgroups and two digits for the items. The corresponding Coicop numbers are also provided.

Coicop	SNA codes	
	XDHHCE1	Furniture and household appliances
05.1.1	XDHHCE11	Furniture and furnishings
05.1.2	XDHHCE12	Carpets and other floor coverings
05.3.1	XDHHCE13	Major household appliances whether electric or not
05.5.1	XDHHCE14	Major tools and equipment for house and garden
	XDHHCE2	Personal transport equipment
07.1.1	XDHHCE21	Motor cars
07.1.2	XDHHCE22	Motor cycles

07.1.3	XDHHCE23	Bicycles
07.1.4	XDHHCE24	Animal drawn vehicles
	XDHHCE3	Recreational and entertainment goods
08.2.0	XDHHCE31	Telephone and telefax equipment
09.1.1	XDHHCE32	Equipment for the reception, recording and reproduction of sound and pictures
09.1.2	XDHHCE33	Photographic and cinematographic equipment and optical instruments
09.1.3	XDHHCE34	Information processing equipment
09.2.1	XDHHCE35	Major durables for outdoor recreation
09.2.2	XDHHCE36	Musical instruments and major durables for indoor recreation
	XDHHCE4	Other durable goods
12.3.1	XDHHCE41	Jewellery, clocks and watches
06.1.3	XDHHCE42	Therapeutic medical appliances and equipment

Foreign direct investment

Supplementary items for foreign direct investment (FDI) can be coded with X as prefix plus the F or AF code plus a FDI suffix, for example:

XF42FDI	for foreign direct investment transaction in long-term loans

Contingent positions

Supplementary codes for contingent positions are coded with X as prefix plus the AF code plus a CP suffix, for example:

XAF11CP	when the pledge of monetised gold may affects its usability as reserve asset

Currency and deposits

Supplementary items for the classification of national and foreign denominated currency and deposits are coded with X as prefix plus the F or AF code plus a suffix NC indicating currency and deposits in national currency or an affix FC with and international currency code indicating currency and deposits in foreign currency, for example:

For transactions	
XF21NC	local currency notes and coins
XF22FC	deposits in foreign currency

For stocks	
XAF21NC	local currency notes and coins
XAF22FC	deposits in foreign currency

Classification of debt securities according to outstanding maturity

It is suggested to classify debt securities according to outstanding maturity. This can be achieved by using an X prefix plus the AF code plus a suffix indicating a maturity date, for example:

XAF32Y20	for debt securities maturing in 2020

Listed and unlisted debt securities

Supplementary items on debt securities are coded with X as prefix plus the F or AF code plus a 1 for listed and 2 for unlisted, for example:

For transactions	
XF321	for transactions in listed long-term debt securities
XF322	for transactions in unlisted long-term debt securities

For stocks	
XAF321	for stocks of listed long-term debt securities
XAF322	for stocks of unlisted long-term debt securities

Long-term loans with outstanding maturity of less than one year and long-term loans secured by mortgage

Long-term loans with outstanding maturity of less than one year and long-term loans secured by mortgage are coded with X as prefix plus the F or AF code plus an affix L1 indicating outstanding maturity of less than one year and a suffix LM indicating loans secured by mortgage, for example:

For transactions	
XF42L1	for long-term loans with outstanding maturity of less than one year
XF42LM	for long-term loans secured by mortgage

For stocks	
XAF42L1	for long-term loans with outstanding maturity of less than one year
XAF42LM	for long-term loans secured by mortgage

Listed and unlisted investment shares

Listed and unlisted investment fund shares are coded with X as prefix plus the F or AF code plus 1 for listed and 2 for unlisted, for example:

For transactions	
XF5221	for transactions in listed non-MMF investment fund shares
XF5222	for transactions in unlisted non-MMF investment fund shares

For stocks	
XAF5221	for stocks of listed non-MMF investment fund shares
XAF5222	for stocks of unlisted non-MMF investment fund shares

Arrears in interest and repayments

Arrears in interest and repayments are coded with X as prefix plus the AF code plus an IA affix for interest arrears and PA affix for repayment arrears, for example:

XAF42IA	for interest arrears on long-term loans; and
XAF42PA	for repayment arrears on long-term loans.

Personal and total remittances

Personal remittances and total remittances between resident and non-resident households are coded with X as prefix plus the current transfer code plus a suffix PR for personal remittances and TR for total remittances, as follows:

XD5452PR	for personal remittances between resident and non-resident households
XD5452TR	for total remittances between resident and non-resident households

Regrouping and coding of industries (A) and products (P)

The classifications of activities and products to be used are NACE Rev. 2 and CPA 2008. The corresponding aggregations for the ESA Transmission Programme are: A*3, A*10, A*21, A*38 and A*64 for economic activities and P*3, P*10, P*21, P*38 and P*64 for products. While not used in the ESA Transmission Programme, the levels A*88 (NACE Rev.2) and P*88 (CPA) are also presented in this Chapter.

In the following, the new aggregations are presented.

A*3		
Seq. No	NACE Rev. 2 sections	Description
1	A	Agriculture, forestry and fishing
2	B, C, D, E and F	Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities, construction
3	G, H, I, J, K, L, M, N, O, P, Q, R, S, T and U	Services

A*10		
Seq. No	NACE Rev. 2 sections	Description
1	A	Agriculture, forestry and fishing
2	B, C, D and E	Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities
2a	C	of which: manufacturing
3	F	Construction
4	G, H and I	Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities
5	J	Information and communication
6	K	Financial and insurance activities
7	L	Real estate activities
8	M and N	Professional, scientific and technical activities; administrative and support service activities
9	O, P, and Q	Public administration and defence; compulsory social security; education; human health and social work activities
10	R, S, T and U	Arts, entertainment and recreation; other service activities; activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; activities of extraterritorial organisations and bodies

A*21			
Seq. No	NACE Rev. 2 section	NACE Rev. 2 division	Description
1	A	01-03	Agriculture, forestry and fishing
2	B	05-09	Mining and quarrying
3	C	10-33	Manufacturing
4	D	35	Electricity, gas, steam and air conditioning supply
5	E	36-39	Water supply; sewerage, waste management and remediation activities
6	F	41-43	Construction
7	G	45-47	Wholesale and retail trade; repair of motor vehicles and motorcycles
8	H	49-53	Transportation and storage
9	I	55-56	Accommodation and food service activities
10	J	58-63	Information and communication
11	K	64-66	Financial and insurance activities
12	L	68	Real estate activities
13	M	69-75	Professional, scientific and technical activities
14	N	77-82	Administrative and support service activities
15	O	84	Public administration and defence; compulsory social security
16	P	85	Education
17	Q	86-88	Human health and social work activities
18	R	90-93	Arts, entertainment and recreation

Seq. No	NACE Rev. 2 section	NACE Rev. 2 division	Description
19	S	94-96	Other service activities
20	T	97-98	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
21	U	99	Activities of extraterritorial organisations and bodies

A*38

Seq. No	NACE Rev. 2 divisions	Description
1	01-03	Agriculture, forestry and fishing
2	05-09	Mining and quarrying
3	10-12	Manufacture of food products, beverages and tobacco products
4	13-15	Manufacture of textiles, wearing apparel and leather products
5	16-18	Manufacture of wood and paper products, and printing
6	19	Manufacture of coke and refined petroleum products
7	20	Manufacture of chemicals and chemical products
8	21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
9	22-23	Manufacture of rubber and plastics products, and other non-metallic mineral products
10	24-25	Manufacture of basic metals and fabricated metal products, except machinery and equipment
11	26	Manufacture of computer, electronic and optical products
12	27	Manufacture of electrical equipment
13	28	Manufacture of machinery and equipment n.e.c.
14	29-30	Manufacture of transport equipment
15	31-33	Manufacture of furniture; other manufacturing; repair and installation of machinery and equipment
16	35	Electricity, gas, steam and air conditioning supply
17	36-39	Water supply; sewerage, waste management and remediation activities
18	41-43	Construction
19	45-47	Wholesale and retail trade, repair of motor vehicles and motorcycles
20	49-53	Transportation and storage
21	55-56	Accommodation and food service activities
22	58-60	Publishing, audiovisual and broadcasting activities
23	61	Telecommunications
24	62-63	Computer programming, consultancy and related activities; information service activities
25	64-66	Financial and insurance activities
26	68	Real estate activities
26a		of which: imputed rents of owner-occupied dwellings
27	69-71	Legal and accounting activities; activities of head offices; management consultancy activities; architecture and engineering activities; technical testing and analysis

Seq. No	NACE Rev. 2 divisions	Description
28	72	Scientific research and development
29	73-75	Advertising and market research; other professional, scientific and technical activities; veterinary activities
30	77-82	Administrative and support service activities
31	84	Public administration and defence; compulsory social security
32	85	Education
33	86	Human health activities
34	87-88	Social work activities
35	90-93	Arts, entertainment and recreation
36	94-96	Other service activities
37	97-98	Activities of households as employers of domestic personnel and undifferentiated goods and services production of households for own use
38	99	Activities of extra-territorial organisations and bodies

	A*64	
Seq. No	NACE Rev. 2 divisions	Description
1	01	Crop and animal production, hunting and related service activities
2	02	Forestry and logging
3	03	Fishing and aquaculture
4	05-09	Mining and quarrying
5	10-12	Manufacture of food products, beverages and tobacco products
6	13-15	Manufacture of textiles, wearing apparel and leather products
7	16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
8	17	Manufacture of paper and paper products
9	18	Printing and reproduction of recorded media
10	19	Manufacture of coke and refined petroleum products
11	20	Manufacture of chemicals and chemical products
12	21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
13	22	Manufacture of rubber and plastics products
14	23	Manufacture of other non-metallic mineral products
15	24	Manufacture of basic metals
16	25	Manufacture of fabricated metal products, except machinery and equipment
17	26	Manufacture of computer, electronic and optical products
18	27	Manufacture of electrical equipment
19	28	Manufacture of machinery and equipment n.e.c.
20	29	Manufacture of motor vehicles, trailers and semi-trailers
21	30	Manufacture of other transport equipment
22	31-32	Manufacture of furniture; other manufacturing
23	33	Repair and installation of machinery and equipment
24	35	Electricity, gas, steam and air conditioning supply

Seq. No	NACE Rev. 2 divisions	Description
25	36	Water collection, treatment and supply
26	37-39	Sewerage; waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services
27	41-43	Construction
28	45	Wholesale and retail trade and repair of motor vehicles and motorcycles
29	46	Wholesale trade, except of motor vehicles and motorcycles
30	47	Retail trade, except of motor vehicles and motorcycles
31	49	Land transport and transport via pipelines
32	50	Water transport
33	51	Air transport
34	52	Warehousing and support activities for transportation
35	53	Postal and courier activities
36	55-56	Accommodation; food and beverage service activities
37	58	Publishing activities
38	59-60	Motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities
39	61	Telecommunications
40	62-63	Computer programming, consultancy and related activities; information service activities
41	64	Financial service activities, except insurance and pension funding
42	65	Insurance, reinsurance and pension funding, except compulsory social security
43	66	Activities auxiliary to financial services and insurance activities
44	68	Real estate activities
44a		of which: imputed rents of owner-occupied dwellings
45	69-70	Legal and accounting activities; activities of head offices; management consultancy activities
46	71	Architecture and engineering activities; technical testing and analysis
47	72	Scientific research and development
48	73	Advertising and market research
49	74-75	Other professional, scientific and technical activities; veterinary activities
50	77	Rental and leasing activities
51	78	Employment activities
52	79	Travel agency, tour operator reservation service and related activities
53	80-82	Security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support
54	84	Public administration and defence; compulsory social security
55	85	Education
56	86	Human health activities
57	87-88	Social work activities
58	90-92	Creative, arts and entertainment activities; libraries, archives, museums and other cultural activities; gambling and betting activities
59	93	Sports activities and amusement and recreation activities

Seq. No	NACE Rev. 2 divisions	Description
60	94	Activities of membership organisations
61	95	Repair of computers and personal and household goods
62	96	Other personal service activities
63	97-98	Activities of households as employers of domestic personnel and undifferentiated goods and services production of households for own use
64	99	Activities of extraterritorial organisations and bodies

		A*88
Seq. No	NACE Rev. 2 divisions	Description
1	01	Crop and animal production, hunting and related service activities
2	02	Forestry and logging
3	03	Fishing and aquaculture
4	05	Mining of coal and lignite
5	06	Extraction of crude petroleum and natural gas
6	07	Mining of metal ores
7	08	Other mining and quarrying
8	09	Mining support service activities
9	10	Manufacture of food products
10	11	Manufacture of beverages
11	12	Manufacture of tobacco products
12	13	Manufacture of textiles
13	14	Manufacture of wearing apparel
14	15	Manufacture of leather and related products
15	16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
16	17	Manufacture of paper and paper products
17	18	Printing and reproduction of recorded media
18	19	Manufacture of coke and refined petroleum products
19	20	Manufacture of chemicals and chemical products
20	21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
21	22	Manufacture of rubber and plastic products
22	23	Manufacture of other non-metallic mineral products
23	24	Manufacture of basic metals
24	25	Manufacture of fabricated metal products, except machinery and equipment
25	26	Manufacture of computer, electronic and optical products
26	27	Manufacture of electrical equipment
27	28	Manufacture of machinery and equipment n.e.c.
28	29	Manufacture of motor vehicles, trailers and semi-trailers
29	30	Manufacture of other transport equipment
30	31	Manufacture of furniture
31	32	Other manufacturing

Seq. No	NACE Rev. 2 divisions	Description
32	33	Repair and installation of machinery and equipment
33	35	Electricity, gas, steam and air conditioning supply
34	36	Water collection, treatment and supply
35	37	Sewerage
36	38	Waste collection, treatment and disposal activities; materials recovery
37	39	Remediation activities and other waste management services
38	41	Construction of buildings
39	42	Civil engineering
40	43	Specialised construction activities
41	45	Wholesale and retail trade and repair of motor vehicles and motorcycles
42	46	Wholesale trade, except of motor vehicles and motorcycles
43	47	Retail trade, except of motor vehicles and motorcycles
44	49	Land transport and transport via pipelines
45	50	Water transport
46	51	Air transport
47	52	Warehousing and support activities for transportation
48	53	Postal and courier activities
49	55	Accommodation
50	56	Food and beverage service activities
51	58	Publishing activities
52	59	Motion picture, video and television programme production, sound recording and music publishing activities
53	60	Programming and broadcasting activities
54	61	Telecommunications
55	62	Computer programming, consultancy and related activities
56	63	Information service activities
57	64	Financial service activities, except insurance and pension funding
58	65	Insurance, reinsurance and pension funding, except compulsory social security
59	66	Activities auxiliary to financial services and insurance activities
60	68	Real estate activities
60a		of which: imputed rents of owner-occupied dwellings
61	69	Legal and accounting activities
62	70	Activities of head offices; management consultancy activities
63	71	Architectural and engineering activities; technical testing and analysis
64	72	Scientific research and development
65	73	Advertising and market research
66	74	Other professional, scientific and technical activities
67	75	Veterinary activities
68	77	Rental and leasing activities
69	78	Employment activities
70	79	Travel agency, tour operator reservation service and related activities

Seq. No	NACE Rev. 2 divisions	Description
71	80	Security and investigation activities
72	81	Services to buildings and landscape activities
73	82	Office administrative, office support and other business support activities
74	84	Public administration and defence; compulsory social security
75	85	Education
76	86	Human health activities
77	87	Residential care activities
78	88	Social work activities without accommodation
79	90	Creative, arts and entertainment activities
80	91	Libraries, archives, museums and other cultural activities
81	92	Gambling and betting activities
82	93	Sports activities and amusement and recreation activities
83	94	Activities of membership organisations
84	95	Repair of computers and personal and household goods
85	96	Other personal service activities
86	97	Activities of households as employers of domestic personnel
87	98	Undifferentiated goods- and services-producing activities of private households for own use
88	99	Activities of extraterritorial organisations and bodies

	P*3	
Seq. No	CPA 2008 sections	Description
1	A	Products of agriculture, forestry and fishing
2	B, C, D, E and F	Mining and quarrying; manufactured products; electricity, gas, water and waste management; constructions and construction work
3	G, H, I, J, K, L, M, N, O, P, Q, R, S, T and U	Services

	P*10	
Seq. No	CPA 2008 sections	Description
1	A	Products of agriculture, forestry and fishing
2	B, C, D and E	Mining and quarrying; manufactured products; electricity, gas, water and waste management
2a	C	of which: manufactured products
3	F	Constructions and construction work
4	G, H and I	Wholesale and retail trade services; repair of motor vehicles and motorcycles services; transportation and storage services; accommodation and food services
5	J	Information and communication services
6	K	Financial and insurance services
7	L	Real estate services
8	M and N	Professional, scientific and technical services; administrative and support service services

Seq. No	CPA 2008 sections	Description
9	O, P, and Q	Public administration and defence services; compulsory social security services; education; human health and social work services
10	R, S, T and U	Arts, entertainment and recreation services, repair of household goods and other services

P*21			
Seq. No	CPA 2008 section	CPA 2008 division	Description
1	A	01-03	Products of agriculture, forestry and fishing
2	B	05-09	Mining and quarrying
3	C	10-33	Manufactured products
4	D	35	Electricity, gas, steam and air conditioning
5	E	36-39	Water supply; sewerage, waste management and remediation services
6	F	41-43	Constructions and construction works
7	G	45-47	Wholesale and retail trade services; repair services of motor vehicles and motorcycles
8	H	49-53	Transportation and storage services
9	I	55-56	Accommodation and food services
10	J	58-63	Information and communication services
11	K	64-66	Financial and insurance services
12	L	68	Real estate services
13	M	69-75	Professional, scientific and technical services
14	N	77-82	Administrative and support services
15	O	84	Public administration and defence services; compulsory social security services
16	P	85	Education services
17	Q	86-88	Human health and social work services
18	R	90-93	Arts, entertainment and recreation services
19	S	94-96	Other services
20	T	97-98	Services of households as employers; undifferentiated goods and services produced by households for own use
21	U	99	Services provided by extraterritorial organisations and bodies

P*38		
Seq. No	CPA 2008 divisions	Description
1	01-03	Products of agriculture, forestry and fishing
2	05-09	Mining and quarrying
3	10-12	Food products, beverages and tobacco products
4	13-15	Textiles, wearing apparel and leather products
5	16-18	Wood and paper products, and printing services
6	19	Coke and refined petroleum products

Seq. No	CPA 2008 divisions	Description
7	20	Chemicals and chemical products
8	21	Basic pharmaceutical products and pharmaceutical preparations
9	22-23	Rubber and plastics products, and other non-metallic mineral products
10	24-25	Basic metals and fabricated metal products, except machinery and equipment
11	26	Computer, electronic and optical products
12	27	Electrical equipment
13	28	Machinery and equipment n.e.c.
14	29-30	Transport equipment
15	31-33	Furniture; other manufactured goods; repair and installation services of machinery and equipment
16	35	Electricity, gas, steam and air conditioning
17	36-39	Water supply; sewerage, waste management and remediation services
18	41-43	Constructions and construction works
19	45-47	Wholesale and retail trade services; repair services of motor vehicles and motorcycles
20	49-53	Transportation and storage services
21	55-56	Accommodation and food services
22	58-60	Publishing, audiovisual and broadcasting services
23	61	Telecommunications services
24	62-63	Computer programming, consultancy and related services; information services
25	64-66	Financial and insurance services
26	68	Real estate services
26a		of which: imputed rents of owner-occupied dwellings
27	69-71	Legal and accounting services; services of head offices; management consultancy services; architectural and engineering services; technical testing and analysis services
28	72	Scientific research and development services
29	73-75	Advertising and market research services; other professional, scientific and technical services; veterinary services
30	77-82	Administrative and support services
31	84	Public administration and defence services; compulsory social security services
32	85	Education services
33	86	Human health services
34	87-88	Social work services
35	90-93	Arts, entertainment and recreation services
36	94-96	Other services
37	97-98	Services of households as employers; undifferentiated goods and services produced by households for own use
38	99	Services provided by extraterritorial organisations and bodies

P*64		
Seq. No	CPA 2008 divisions	Description
1	01	Products of agriculture, hunting and related services
2	02	Products of forestry, logging and related services
3	03	Fish and other fishing products; aquaculture products; support services to fishing
4	05-09	Mining and quarrying
5	10-12	Food products; beverages; tobacco products
6	13-15	Textiles; wearing apparel; leather and related products
7	16	Wood and products of wood and cork, except furniture; articles of straw and plaiting materials
8	17	Paper and paper products
9	18	Printing and recording services
10	19	Coke and refined petroleum products
11	20	Chemicals and chemical products
12	21	Basic pharmaceutical products and pharmaceutical preparations
13	22	Rubber and plastics products
14	23	Other non-metallic mineral products
15	24	Basic metals
16	25	Fabricated metal products, except machinery and equipment
17	26	Computer, electronic and optical products
18	27	Electrical equipment
19	28	Machinery and equipment n.e.c.
20	29	Motor vehicles, trailers and semi-trailers
21	30	Other transport equipment
22	31-32	Furniture; other manufactured goods
23	33	Repair and installation services of machinery and equipment
24	35	Electricity, gas, steam and air conditioning
25	36	Natural water; water treatment and supply services
26	37-39	Sewerage services; sewage sludge; waste collection, treatment and disposal services; materials recovery; remediation services and other waste management services
27	41-43	Constructions and construction works
28	45	Wholesale and retail trade and repair services of motor vehicles and motorcycles
29	46	Wholesale trade services, except of motor vehicles and motorcycles
30	47	Retail trade services, except of motor vehicles and motorcycles
31	49	Land transport services and transport services via pipelines
32	50	Water transport services
33	51	Air transport services
34	52	Warehousing and support services for transportation
35	53	Postal and courier services
36	55-56	Accommodation and food services

Seq. No	CPA 2008 divisions	Description
37	58	Publishing services
38	59-60	Motion picture, video and television programme production services, sound recording and music publishing; programming and broadcasting services
39	61	Telecommunications services
40	62-63	Computer programming, consultancy and related services; information services
41	64	Financial services, except insurance and pension funding
42	65	Insurance, reinsurance and pension funding services, except compulsory social security
43	66	Services auxiliary to financial services and insurance services
44	68	Real estate services
44a		of which: imputed rents of owner-occupied dwellings
45	69-70	Legal and accounting services; services of head offices; management consulting services
46	71	Architecture and engineering services; technical testing and analysis services
47	72	Scientific research and development services
48	73	Advertising and market research services
49	74-75	Other professional, scientific and technical services; veterinary services
50	77	Rental and leasing services
51	78	Employment services
52	79	Travel agency, tour operator and other reservation services and related services
53	80-82	Security and investigation services; services to buildings and landscape; office administrative, office support and other business support services
54	84	Public administration and defence services; compulsory social security services
55	85	Education services
56	86	Human health services
57	87-88	Residential care services; social work services without accommodation
58	90-92	Creative, arts and entertainment services; library, archive, museum and other cultural services; gambling and betting services
59	93	Sporting services and amusement and recreation services
60	94	Services furnished by membership organisations
61	95	Repair services of computers and personal and household goods
62	96	Other personal services
63	97-98	Services of households as employers of domestic personnel and undifferentiated goods and services produced by private households for own use
64	99	Services provided by extraterritorial organisations and bodies

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Seq. No	CPA 2008 divisions	Description
1	01	Products of agriculture, hunting and related services
2	02	Products of forestry, logging and related services

Seq. No	CPA 2008 divisions	Description
3	03	Fish and other fishing products; aquaculture products; support services to fishing
4	05	Coal and lignite
5	06	Crude petroleum and natural gas
6	07	Metal ores
7	08	Other mining and quarrying products
8	09	Mining support services
9	10	Food products
10	11	Beverages
11	12	Tobacco products
12	13	Textiles
13	14	Wearing apparel
14	15	Leather and related products
15	16	Wood and products of wood and cork, except furniture; articles of straw and plaiting materials
16	17	Paper and paper products
17	18	Printing and recording services
18	19	Coke and refined petroleum products
19	20	Chemicals and chemical products
20	21	Basic pharmaceutical products and pharmaceutical preparations
21	22	Rubber and plastics products
22	23	Other non-metallic mineral products
23	24	Basic metals
24	25	Fabricated metal products, except machinery and equipment
25	26	Computer, electronic and optical products
26	27	Electrical equipment
27	28	Machinery and equipment n.e.c.
28	29	Motor vehicles, trailers and semi-trailers
29	30	Other transport equipment
30	31	Furniture
31	32	Other manufactured goods
32	33	Repair and installation services of machinery and equipment
33	35	Electricity, gas, steam and air conditioning
34	36	Natural water; water treatment and supply services
35	37	Sewerage services; sewage sludge
36	38	Waste collection, treatment and disposal services; materials recovery services
37	39	Remediation services and other waste management services
38	41	Buildings and building construction works
39	42	Constructions and construction works for civil engineering
40	43	Specialised construction works
41	45	Wholesale and retail trade and repair services of motor vehicles and motorcycles

Seq. No	CPA 2008 divisions	Description
42	46	Wholesale trade services, except of motor vehicles and motorcycles
43	47	Retail trade services, except of motor vehicles and motorcycles
44	49	Land transport services and transport services via pipelines
45	50	Water transport services
46	51	Air transport services
47	52	Warehousing and support services for transportation
48	53	Postal and courier services
49	55	Accommodation services
50	56	Food and beverage serving services
51	58	Publishing services
52	59	Motion picture, video and television programme production services, sound recording and music publishing
53	60	Programming and broadcasting services
54	61	Telecommunications services
55	62	Computer programming, consultancy and related services
56	63	Information services
57	64	Financial services, except insurance and pension funding
58	65	Insurance, reinsurance and pension funding services, except compulsory social security
59	66	Services auxiliary to financial services and insurance services
60	68	Real estate services
60a		of which: imputed rents of owner-occupied dwellings
61	69	Legal and accounting services
62	70	Services of head offices; management consulting services
63	71	Architectural and engineering services; technical testing and analysis services
64	72	Scientific research and development services
65	73	Advertising and market research services
66	74	Other professional, scientific and technical services
67	75	Veterinary services
68	77	Rental and leasing services
69	78	Employment services
70	79	Travel agency, tour operator and other reservation services and related services
71	80	Security and investigation services
72	81	Services to buildings and landscape
73	82	Office administrative, office support and other business support services
74	84	Public administration and defence services; compulsory social security services
75	85	Education services
76	86	Human health services
77	87	Residential care services
78	88	Social work services without accommodation

Seq. No	CPA 2008 divisions	Description
79	90	Creative, arts and entertainment services
80	91	Library, archive, museum and other cultural services
81	92	Gambling and betting services
82	93	Sporting services and amusement and recreation services
83	94	Services furnished by membership organisations
84	95	Repair services of computers and personal and household goods
85	96	Other personal services
86	97	Services of households as employers of domestic personnel
87	98	Undifferentiated goods and services produced by private households for own use
88	99	Services provided by extraterritorial organisations and bodies

Classification of the functions of the government (COFOG)

01	General public services
01.1	Executive and legislative organs, financial and fiscal affairs, external affairs
01.2	Foreign economic aid
01.3	General services
01.4	Basic research
01.5	R&D general public services
01.6	General public services n.e.c.
01.7	Public debt transactions
01.8	Transfers of a general character between different levels of government
02	Defence
02.1	Military defence
02.2	Civil defence
02.3	Foreign military aid
02.4	R&D defence
02.5	Defence n.e.c.
03	Public order and safety
03.1	Police services
03.2	Fire-protection services
03.3	Law courts
03.4	Prisons
03.5	R&D public order and safety
03.6	Public order and safety n.e.c.
04	Economic affairs
04.1	General economic, commercial and labour affairs

04.2	Agriculture, forestry, fishing and hunting
04.3	Fuel and energy
04.4	Mining, manufacturing and construction
04.5	Transport
04.6	Communication
04.7	Other industries
04.8	R&D economic affairs
04.9	Economic affairs n.e.c.
05	Environmental protection
05.1	Waste management
05.2	Waste water management
05.3	Pollution abatement
05.4	Protection of biodiversity and landscape
05.5	R&D environmental protection
05.6	Environmental protection n.e.c.
06	Housing and community amenities
06.1	Housing development
06.2	Community development
06.3	Water supply
06.4	Street lighting
06.5	R&D housing and community amenities
06.6	Housing and community amenities n.e.c.
07	Health
07.1	Medical products, appliances and equipment
07.2	Outpatient services
07.3	Hospital services
07.4	Public health services
07.5	R&D health
07.6	Health n.e.c.
08	Recreation, culture and religion
08.1	Recreational and sporting services
08.2	Cultural services
08.3	Broadcasting and publishing services
08.4	Religious and other community services
08.5	R&D recreation, culture and religion
08.6	Recreation, culture and religion n.e.c.
09	Education
09.1	Pre-primary and primary education
09.2	Secondary education
09.3	Post-secondary non-tertiary education
09.4	Tertiary education
09.5	Education not definable by level

09.6	Subsidiary services to education
09.7	R&D education
09.8	Education n.e.c.
10	Social protection
10.1	Sickness and disability
10.2	Old age
10.3	Survivors
10.4	Family and children
10.5	Unemployment
10.6	Housing
10.7	Social exclusion n.e.c.
10.8	R&D social protection
10.9	Social protection n.e.c.

Classification of individual consumption by purpose (Coicop)

	01-12 Individual consumption expenditure of households
01	Food and non-alcoholic beverages
01.1	Food
01.2	Non-alcoholic beverages
02	Alcoholic beverages, tobacco and narcotics
02.1	Alcoholic beverages
02.2	Tobacco
02.3	Narcotics
03	Clothing and footwear
03.1	Clothing
03.2	Footwear
04	Housing, water, electricity, gas and other fuels
04.1	Actual rentals for housing
04.2	Imputed rentals for housing
04.3	Maintenance and repair of the dwelling
04.4	Water supply and miscellaneous services relating to the dwelling
04.5	Electricity, gas and other fuels
05	Furnishings, household equipment and routine household maintenance
05.1	Furniture and furnishings, carpets and other floor coverings
05.2	Household textiles
05.3	Household appliances
05.4	Glassware, tableware and household utensils
05.5	Tools and equipment for house and garden

05.6	Goods and services for routine household maintenance
06	Health
06.1	Medical products, appliances and equipment
06.2	Outpatient services
06.3	Hospital services
07	Transport
07.1	Purchase of vehicles
07.2	Operation of personal transport equipment
07.3	Transport services
08	Communication
08.1	Postal services
08.2	Telephone and telefax equipment
08.3	Telephone and telefax services
09	Recreation and culture
09.1	Audio-visual, photographic and information processing equipment
09.2	Other major durables for recreation and culture
09.3	Other recreational items and equipment, gardens and pets
09.4	Recreational and cultural services
09.5	Newspapers, books and stationery
09.6	Package holidays
10	Education
10.1	Pre-primary and primary education
10.2	Secondary education
10.3	Post-secondary non-tertiary education
10.4	Tertiary education
10.5	Education not definable by level
11	Restaurants and hotels
11.1	Catering services
11.2	Accommodation services
12	Miscellaneous goods and services
12.1	Personal care
12.2	Prostitution
12.3	Personal effects n.e.c.
12.4	Social protection
12.5	Insurance
12.6	Financial services n.e.c.
12.7	Other services n.e.c.
13	Individual consumption expenditure of non-profit institutions serving households (NPISHs)
13.1	Housing
13.2	Health
13.3	Recreation and culture

13.4	Education
13.5	Social protection
13.6	Other services
14	Individual consumption expenditure of general government
14.1	Housing
14.2	Health
14.3	Recreation and culture
14.4	Education
14.5	Social protection

Classification of the purposes of non-profit institutions serving households (COPNI)

01	Housing
02.	Health
02.1	Medical products, appliances and equipment
02.2	Outpatient services
02.3	Hospital services
02.4	Public health services
02.5	R&D health
02.6	Other health services
03	Recreation and culture
03.1	Recreational and sporting services
03.2	Cultural services
04	Education
04.1	Pre-primary and primary education
04.2	Secondary education
04.3	Post-secondary non-tertiary education
04.4	Tertiary education
04.5	Education not definable by level
04.6	R&D education
04.7	Other educational services
05	Social protection
05.1	Social protection services
05.2	R&D social protection
06	Religion
07	Political parties, labour and professional organisations
07.1	Services of political parties
07.2	Services of labour organisations

07.3	Services of professional organisations
08	Environmental protection
08.1	Environmental protection services
08.2	R&D environmental protection
09	Services n.e.c.
09.1	Services n.e.c. (excluding R&D)
09.2	R&D services n.e.c.

Classification of outlays of producers by purpose (COPP)

01	Outlays on infrastructure
01.1	Outlays on road and land construction and improvement
01.2	Outlays on engineering and related technological work
01.3	Outlays on information management
02	Outlays on research and development
02.1	Outlays on research and experimental development on natural sciences and engineering
02.2	Outlays on research and experimental development on social sciences and humanities
03	Outlays on environmental protection
03.1	Outlays on protection of ambient air and climate
03.2	Outlays on waste water management
03.3	Outlays on waste management
03.4	Outlays on protection of soil and groundwater
03.5	Outlays on noise and vibration abatement
03.6	Outlays on protection of biodiversity and landscape
03.7	Outlays on environmental protection n.e.c.
04	Outlays on marketing
04.1	Outlays on direct sales effects
04.2	Outlays on advertising
04.3	Outlays on marketing n.e.c.
05	Outlays on human resource development
05.1	Outlays on education and training
05.2	Outlays on health
05.3	Outlays on social services
06	Outlays on current production programmes, administration and management
06.1	Outlays on current production programmes
06.2	Outlays on external transportation
06.3	Outlays on safety and security
06.4	Outlays on management and administration

CHAPTER 24

The accounts

Table 24.1 — Account 0: Goods and services account

Resources			**Uses**		
P.1	Output	3 604	P.2	Intermediate consumption	1 883
P.11	Market output	3 077	P.3	Final consumption expenditure	1 399
P.12	Output for own final use	147	P.31	Individual consumption expenditure	1 230
P.13	Non-market output	380	P.32	Collective consumption expenditure	169
D.21	Taxes on products	141	P.5g	Gross capital formation	414
			P.511	Acquisitions less disposals of fixed assets	359
D.31	Subsidies on products	–8	P.5111	Acquisitions of new fixed assets	358
			P.5112	Acquisitions of existing fixed assets	9
P.7	Imports of goods and services	499	P.5113	Disposals of existing fixed assets	–8
P.71	Imports of goods	392	P.512	Costs of ownership transfer on non-produced assets	17
P.72	Imports of services	107			
			P.52	Changes in inventories	28
			P.53	Acquisitions less disposals of valuables	10
			P.6	Exports of goods and services	540
			P.61	Exports of goods	462
			P.62	Exports of services	78

Table 24.2 — Full sequence of accounts for the total economy

I: Production account

Uses			Resources		
P.2	Intermediate consumption	1 883	P.1	Output	3 604
			P.11	Market output	3 077
			P.12	Output for own final use	147
			P.13	Non-market output	380
			D.21 – D.31	Taxes less subsidies on products	133
B.1*g	**Gross domestic product**	1 854			
P.51c	Consumption of fixed capital	222			
B.1*n	**Net domestic product**	1 632			

II: Distribution and use of income accounts
II.1: Primary distribution of income account
II.1.1: Generation of income account

Uses			Resources		
D.1	Compensation of employees	1 150	B.1*g	**Gross domestic product**	1 854
D.11	Wages and salaries	950	B.1*n	**Net domestic product**	1 632
D.12	Employers' social contributions	200			
D.121	Employers' actual social contributions	181			
D.1211	Employers' actual pension contributions	168			
D.1212	Employers' actual non-pension contributions	13			
D.122	Employers' imputed social contributions	19			
D.1221	Employers' imputed pension contributions	18			
D.1222	Employers' imputed non-pension contributions	1			
D.2	Taxes on production and imports	235			
D.21	Taxes on products	141			
D.211	Value added type taxes (VAT)	121			
D.212	Taxes and duties on imports excluding VAT	17			
D.2121	Import duties	17			
D.2122	Taxes on imports excluding VAT and duties	0			
D.214	Taxes on products except VAT and import taxes	3			
D.29	Other taxes on production	94			
D.3	Subsidies	–44			
D.31	Subsidies on products	–8			
D.311	Import subsidies	0			

Uses			Resources		
D.319	Other subsidies on products	–8			
D.39	Other subsidies on production	–36			
B.2g	**Operating surplus, gross**	452			
B.3g	**Mixed income, gross**	61			
P.51c1	Consumption of fixed capital on gross operating surplus	214			
P.51c2	Consumption of fixed capital on gross mixed income	8			
B.2n	**Operating surplus, net**	238			
B.3n	**Mixed income, net**	53			

II.1.2: Allocation of primary income account

Uses			Resources		
D.4	Property income	391	B.2g	**Operating surplus. gross**	452
D.41	Interest	217	B.3g	**Mixed income, gross**	61
D.42	Distributed income of corporations	62	B.2n	**Operating surplus, net**	238
D.421	Dividends	54	B.3n	**Mixed income, net**	53
D.422	Withdrawals from income of quasi-corporations	8			
D.43	Reinvested earnings on foreign direct investment	0	D.1	Compensation of employees	1 154
D.44	Other investment income	47	D.11	Wages and salaries	954
D.441	Investment income attributable to insurance		D.12	Employers' social contributions	200
	policy holders	25	D.121	Employers' actual social contributions	181
D.442	Investment income payable on pension		D.1211	Employers' actual pension contributions	168
	entitlements	8	D.1212	Employers' actual non-pension contributions	13
D.443	Investment income attributable to collective		D.122	Employers' imputed social contributions	19
	investment fund shareholders	14	D.1221	Employers' imputed pension contributions	18
D.4431	Dividends attributable to collective		D.1222	Employers' imputed non-pension contributions	1
	investment fund shareholders	6			
D.4432	Retained earnings attributable to collective		D.2	Taxes on production and imports	235
	investment fund shareholders	8	D.21	Taxes on products	141
D.45	Rent	65	D.211	Value added type taxes (VAT)	121
			D.212	Taxes and duties on imports excluding VAT	17
			D.2121	Import duties	17

Uses			Resources		
			D.2122	Taxes on imports excluding VAT and duties	0
			D.214	Taxes on products except VAT and import taxes	3
			D.29	Other taxes on production	94
			D.3	Subsidies	–44
			D.31	Subsidies on products	–8
			D.311	Import subsidies	0
			D.319	Other subsidies on products	–8
			D.39	Other subsidies on production	–36
			D.4	Property income	397
			D.41	Interest	209
			D.42	Distributed income of corporations	62
			D.421	Dividends	53
			D.422	Withdrawals from income of quasi-corporations	9
			D.43	Reinvested earnings on foreign direct investment	14
			D.44	Other investment income	47
			D.441	Investment income attributable to insurance policy holders	25
			D.442	Investment income payable on pension entitlements	8
			D.443	Investment income attributable to collective investment fund shareholders	14
			D.4431	Dividends attributable to collective investment fund shareholders	6
			D.4432	Retained earnings attributable to collective investment fund shareholders	8
			D.45	Rent	65
B.5*g	**Gross national income**	1 864			
B.5*n	**Net national income**	1 642			

II.1.2.1: Entrepreneurial income account

Uses			Resources		
D.4	Property income	240	B.2g	**Operating surplus, gross**	452
D.41	Interest	162	B.3g	**Mixed income, gross**	61
D.44	Other investment income	47	B.2n	**Operating surplus, net**	238
D.441	Investment income attributable to insurance policy holders	25	B.3n	**Mixed income, net**	53

Uses			Resources		
D.442	Investment income payable on pension				
	entitlements	8	D.4	Property income	245
D.443	Investment income attributable to collective		D.41	Interest	139
	investment fund shareholders	14	D.42	Distributed income of corporations	35
D.45	Rent	31	D.421	Dividends	35
			D.422	Withdrawals from income of quasi-corporations	0
			D.43	Reinvested earnings on foreign direct investment	11
			D.44	Other investment income	16
			D.441	Investment income attributable to insurance policy holders	5
			D.442	Investment income payable on pension entitlements	0
			D.443	Investment income attributable to collective investment fund shareholders	11
			D.45	Rent	44
B.4g	**Entrepreneurial income, gross**	343			
B.4n	**Entrepreneurial income, net**	174			

II.1.2.2: Allocation of other primary income account

Uses			Resources		
D.4	Property income	151	B.4g	**Entrepreneurial income. gross**	343
D.41	Interest	55	B.4n	**Entrepreneurial income, net**	174
D.42	Distributed income of corporations	62			
D.421	Dividends	54	D.1	Compensation of employees	1 154
D.422	Withdrawals from income of quasi-corporations	8	D.11	Wages and salaries	954
D.43	Reinvested earnings on foreign direct investment	0	D.12	Employers' social contributions	200
D.44	Other investment income		D.121	Employers' actual social contributions	181
D.441	Investment income attributable to insurance		D.122	Employers' imputed social contributions	19
	policy holders				
D.442	Investment income payable on pension		D.2	Taxes on production and imports	235
	entitlements		D.21	Taxes on products	141
D.443	Investment income attributable to collective		D.211	Value added type taxes (VAT)	121
	investment fund shareholders		D.212	Taxes and duties on imports excluding VAT	17

Uses			Resources		
D.45	Rent	34	D.2121	Import duties	17
			D.2122	Taxes on imports excluding VAT and duties	0
			D.214	Taxes on products except VAT and import taxes	3
			D.29	Other taxes on production	94
			D.3	Subsidies	–44
			D.31	Subsidies on products	–8
			D.311	Import subsidies	0
			D.319	Other subsidies on products	–8
			D.39	Other subsidies on production	–36
			D.4	Property income	152
			D.41	Interest	70
			D.42	Distributed income of corporations	27
			D.421	Dividends	18
			D.422	Withdrawals from income of quasi-corporations	9
			D.43	Reinvested earnings on foreign direct investment	3
			D.44	Other investment income	31
			D.441	Investment income attributable to insurance policy holders	20
			D.442	Investment income payable on pension entitlements	8
			D.443	Investment income attributable to collective investment fund shareholders	3
			D.45	Rent	21
B.5*g	**Gross national income**	1 864			
B.5*n	**Net national income**	1 642			

II.2: Secondary distribution of income account

Uses			Resources		
	Current transfers	1 212	B.5*g	**Gross national income**	1 864
D.5	Current taxes on income, wealth, etc.	212	B.5*n	**Net national income**	1 642
D.51	Taxes on income	203			
D.59	Other current taxes	9	Current transfers		1 174
D.61	Net social contributions	333	D.5	Current taxes on income, wealth, etc.	213
D.611	Employers' actual social contributions	181	D.51	Taxes on income	204
D.6111	Employers' actual pension contributions	168	D.59	Other current taxes	9

Uses			Resources		
D.6112	Employers' actual non-pension contributions	13	D.61	Net social contributions	333
D.612	Employers' imputed social contributions	19	D.611	Employers' actual social contributions	181
D.6121	Employers' imputed pension contributions	18	D.6111	Employers' actual pension contributions	168
D.6122	Employers' imputed non-pension contributions	1	D.6112	Employers' actual non-pension contributions	13
D.613	Households' actual social contributions	129	D.612	Employers' imputed social contributions	19
D.6131	Households' actual pension contributions	115	D.6121	Employers' imputed pension contributions	18
D.6132	Households' actual non-pension contributions	14	D.6122	Employers' imputed non-pension contributions	1
D.614	Households' social contribution supplements	10	D.613	Households' actual social contributions	129
D.6141	Households' pension contribution supplements	8	D.6131	Households' actual pension contributions	115
D.6142	Households' non-pension contribution supplements	2	D.6132	Households' actual non-pension contributions	14
D.61SC	Social insurance scheme service charges	−6	D.614	Households' social contribution supplements	10
			D.6141	Households' pension contribution supplements	8
D.62	Social benefits other than social transfers in kind	384	D.6142	Households' non-pension contribution supplements	2
D.621	Social security benefits in cash	53	D.61SC	Social insurance scheme service charges	6
D.6211	Social security pension benefits in cash	45			
D.6212	Social security non-pension benefits in cash	8	D.62	Social benefits other than social transfers in kind	384
D.622	Other social insurance benefits	279	D.621	Social security benefits in cash	53
D.6221	Other social insurance pension benefits	250	D.6211	Social security pension benefits in cash	45
D.6222	Other social insurance non-pension benefits	29	D.6212	Social security non-pension benefits in cash	8
D.623	Social assistance benefits in cash	52	D.622	Other social insurance benefits	279
			D.6221	Other social insurance pension benefits	250
D.7	Other current transfers	283	D.6222	Other social insurance non-pension benefits	29
D.71	Net non-life insurance premiums	56	D.623	Social assistance benefits in cash	52
D.711	Net non-life direct insurance premiums	43			
D.712	Net non-life reinsurance premiums	13	D.7	Other current transfers	244
D.72	Non-life insurance claims	48	D.71	Net non-life insurance premiums	47

Uses			Resources		
D.721	Non-life direct insurance claims	45	D.711	Net non-life direct insurance premiums	44
D.722	Non-life reinsurance claims	3	D.712	Net non-life reinsurance premiums	3
D.73	Current transfers within general government	96	D.72	Non-life insurance claims	57
D.74	Current international cooperation	22	D.721	Non-life direct insurance claims	42
D.75	Miscellaneous current transfers	52	D.722	Non-life reinsurance claims	15
D.751	Current transfers to NPISHs	36	D.73	Current transfers within general government	96
D.752	Current transfers between households	7	D.74	Current international cooperation	1
D.759	Other miscellaneous current transfers	9	D.75	Miscellaneous current transfers	43
D.76	VAT- and GNI-based EU own resources	9	D.751	Current transfers to NPISHs	36
			D.752	Current transfers between households	1
			D.759	Other miscellaneous current transfers	6
B.6*g	**National disposable income, gross**	1 826			
B.6*n	**National disposable income, net**	1 604			

II.3: Redistribution of income in kind account

Uses			Resources		
D.63	Social transfers in kind	215	B.6*g	National disposable **income, gross**	1 826
D.631	Social transfers in kind — non-market production	211	B.6*n	National disposable **income, net**	1 604
D.632	Social transfers in kind — purchased market production	4			
			D.63	Social transfers in kind	215
			D.631	Social transfers in kind — non-market production	211
			D.632	Social transfers in kind — purchased market production	4
B.7*g	**Adjusted national disposable income, gross**	1 826			
B.7*n	**Adjusted national disposable income, net**	1 604			

II.4: Use of income account
II.4.1: Use of disposable income account

Uses			Resources		
			B.6*g	National disposable income, gross	1 826
P.3	Final consumption expenditure	1 399	B.6*n	National disposable income, net	1 604
P.31	Individual consumption expenditure	1 230			
P.32	Collective consumption expenditure	169	D.8	Adjustment for the change in pension entitlements	11
D.8	Adjustment for the change in pension entitlements	11			
B.8*g	National saving, gross	427			
B.8*n	National saving, net	205			

II.4.2: Use of adjusted disposable income account

Uses			Resources		
			B.7g	Adjusted disposable income, gross	1 826
P.4	Actual final consumption	1 399	B.7n	Adjusted disposable income, net	1 604
P.41	Actual individual consumption	1 230			
P.42	Actual collective consumption	169	D.8	Adjustment for the change in pension entitlements	11
D.8	Adjustment for the change in pension entitlements	11			
B.8*g	National saving, gross	427			
B.8*n	National saving, net	205			

III: Accumulation accounts
III.1: Capital account
III.1.1: Change in net worth due to saving and capital transfers account

Changes in assets			Changes in liabilities and net worth		
B.101	Changes in net worth due to saving and capital transfers	202	B.8*n	National saving, net	205
			D.9r	Capital transfers, receivable	62
			D.91r	Capital taxes, receivable	2
			D.92r	Investment grants, receivable	23
			D.99r	Other capital transfers, receivable	37
			D.9p	Capital transfers, payable	–65
			D.91p	Capital taxes, payable	–2
			D.92p	Investment grants, payable	–27
			D.99p	Other capital transfers, payable	–36

III.1.2: Acquisition of non-financial assets account

Changes in assets			Changes in liabilities and net worth		
P.5g	Gross capital formation	414	B.101	Changes in net worth due to saving and capital transfers	202
P.5n	Net capital formation	192			
P.51g	Gross fixed capital formation	376			
P.511	Acquisitions less disposals of fixed assets	359			
P.5111	Acquisitions of new fixed assets	358			
P.5112	Acquisitions of existing fixed assets	9			
P.5113	Disposal of existing fixed assets	–8			
P.512	Costs of ownership transfer on non-produced assets	17			
P.51c	Consumption of fixed capital	–222			
P.52	Changes in inventories	28			
P.53	Acquisitions less disposals of valuables	10			
NP	Acquisitions less disposals of non-produced assets	0			
NP.1	Acquisitions less disposals of natural resources	0			
NP.2	Acquisitions less disposals of contracts, leases and licences	0			
NP.3	Purchases less sales of goodwill and marketing assets	0			
B.9	Net lending (+)/net borrowing (–)	10			

III.2: Financial account

Changes in assets			Changes in liabilities and net worth		
			B.9	Net lending (+)/net borrowing (–)	10
F	Net acquisition of financial assets	436	F	Net incurrence of liabilities	426
F.1	Monetary gold and SDRs	–1	F.1	Monetary gold and SDRs	0
F.11	Monetary gold	–1	F.11	Monetary gold	
F.12	SDRs	0	F.12	SDRs	0
F.2	Currency and deposits	89	F.2	Currency and deposits	102
F.21	Currency	33	F.21	Currency	35
F.22	Transferable deposits	26	F.22	Transferable deposits	28
F.221	Inter-bank positions	–5	F.221	Inter-bank positions	–5
F.229	Other transferable deposits	31	F.229	Other transferable deposits	33
F.29	Other deposits	30	F.29	Other deposits	39
F.3	Debt securities	86	F.3	Debt securities	74
F.31	Short-term	27	F.31	Short-term	24

Changes in assets			Changes in liabilities and net worth		
F.32	Long-term	59	F.32	Long-term	50
F.4	Loans	78	F.4	Loans	47
F.41	Short-term	22	F.41	Short-term	11
F.42	Long-term	56	F.42	Long-term	36
F.5	Equity and investment fund shares	107	F.5	Equity and investment fund shares	105
F.51	Equity	91	F.51	Equity	94
F.511	Listed shares	77	F.511	Listed shares	84
F.512	Unlisted shares	7	F.512	Unlisted shares	7
F.519	Other equity	7	F.519	Other equity	3
F.52	Investment fund shares/units	16	F.52	Investment fund shares/units	11
F.521	Money market fund shares/units	7	F.521	Money market fund shares/units	5
F.522	Non-MMF investment fund shares/units	9	F.522	Non-MMF investment fund shares/units	6
F.6	Insurance, pension and standardised guarantee schemes	48	F.6	Insurance, pension and standardised guarantee schemes	48
F.61	Non-life insurance technical reserves	7	F.61	Non-life insurance technical reserves	7
F.62	Life insurance and annuity entitlements	22	F.62	Life insurance and annuity entitlements	22
F.63	Pension entitlements	11	F.63	Pension entitlements	11
F.64	Claim of pension fund on pension managers	3	F.64	Claim of pension fund on pension managers	3
F.65	Entitlements to non-pension benefits	2	F.65	Entitlements to non-pension benefits	2
F.66	Provisions for calls under standardised guarantees	3	F.66	Provisions for calls under standardised guarantees	3
F.7	Financial derivatives and employee stock options	14	F.7	Financial derivatives and employee stock options	11
F.71	Financial derivatives	12	F.71	Financial derivatives	9
F.711	Options	5	F.711	Options	4
F.712	Forwards	7	F.712	Forwards	5
F.72	Employee stock options	2	F.72	Employee stock options	2
F.8	Other accounts receivable/ payable	15	F.8	Other accounts receivable/ payable	39
F.81	Trade credits and advances	7	F.81	Trade credits and advances	16
F.89	Other accounts receivable/ payable, excluding trade credits and advances	8	F.89	Other accounts receivable/ payable, excluding trade credits and advances	23

III.3: Other changes in assets accounts
III.3.1: Other changes in volume of assets account

Changes in assets			Changes in liabilities and net worth		
K.1	Economic appearance of assets	33	K.5	Other changes in volume n.e.c.	1
AN.1	Produced non-financial assets	3	AN.1	Produced non-financial assets	

Changes in assets			Changes in liabilities and net worth		
AN.2	Non-produced non-financial assets	30	AN.2	Non-produced non-financial assets	
AN.21	Natural resources	26	AF	Financial assets/liabilities	1
AN.22	Contracts, leases and licences	4	K.6	Changes in classification	2
AN.23	Purchases less sales of goodwill and marketing assets	0	K.61	Changes in sector classification and structure	2
K.2	Economic disappearance of non-produced assets	−11	AN.1	Produced non-financial assets	
K.21	Depletion of natural resources	−8	AN.2	Non-produced non-financial assets	
AN.21	Natural resources	−8	AF	Financial assets/liabilities	2
K.22	Other economic disappearance of non-produced assets	−3	K.62	Changes in classification of assets and liabilities	0
AN.21	Natural resources	0	AN.1	Produced non-financial assets	
AN.22	Contracts, leases and licences	−1	AN.2	Non-produced non-financial assets	
AN.23	Purchases less sales of goodwill and marketing assets	−2	AF	Financial assets/liabilities	0
K.3	Catastrophic losses	−11	Total other changes in volume		3
AN.1	Produced non-financial assets	−9	AN.1	Produced non-financial assets	
AN.2	Non-produced non-financial assets	−2	AN.11	Fixed assets	
AF	Financial assets/liabilities	0	AN.12	Inventories	
K.4	Uncompensated seizures	0	AN.13	Valuables	
AN.1	Produced non-financial assets	0	AN.2	Non-produced non-financial assets	
AN.2	Non-produced non-financial assets	0	AN.21	Natural resources	
AF	Financial assets	0	AN.22	Contracts, leases and licences	
K.5	Other changes in volume n.e.c.	2	AN.23	Purchases less sales of goodwill and marketing assets	
AN.1	Produced non-financial assets	1	AF	Financial assets	3
AN.2	Non-produced non-financial assets	0	AF.1	Monetary gold and SDRs	
AF	Financial assets/liabilities	1	AF.2	Currency and deposits	
K.6	Changes in classification	0	AF.3	Debt securities	
K.61	Changes in sector classification and structure	2	AF.4	Loans	0
AN.1	Produced non-financial assets	0	AF.5	Equity and investment fund shares	2
AN.2	Non-produced non-financial assets	0	AF.6	Insurance pension and standardised guarantee schemes	1
AF	Financial assets/liabilities	2	AF.7	Financial derivatives and employee stock options	
K.62	Changes in classification of assets and liabilities	−2	AF.8	Other accounts receivable/payable	

Changes in assets			Changes in liabilities and net worth		
AN.1	Produced non-financial assets	–2			
AN.2	Non-produced non-financial assets	0			
AF	Financial assets/liabilities	0			
Total other changes in volume		13			
AN.1	Produced non-financial assets	–7			
AN.11	Fixed assets	–2			
AN.12	Inventories	–3			
AN.13	Valuables	–2			
AN.2	Non-produced non-financial assets	17			
AN.21	Natural resources	9			
AN.22	Contracts, leases and licences	6			
AN.23	Purchases less sales of goodwill and marketing assets	0			
AF	Financial assets	3			
AF.1	Monetary gold and SDRs	0			
AF.2	Currency and deposits	0			
AF.3	Debt securities	0			
AF.4	Loans				
AF.5	Equity and investment fund shares	2			
AF.6	Insurance pension and standardised guarantee schemes	1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.102	Changes in net worth due to other changes in volume of assets	10

III.3.2: Revaluation account

Changes in assets			Changes in liabilities and net worth		
K.7	Nominal holding gains (+)/ losses (–)		K.7	Nominal holding gains(–)/losses (+)	
AN	Non-financial assets	280	AF	Liabilities	76
AN.1	Produced non-financial assets	126	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	111	AF.2	Currency and deposits	0
AN.12	Inventories	7	AF.3	Debt securities	42
AN.13	Valuables	8	AF.4	Loans	0
AN.2	Non-produced non-financial assets	154	AF.5	Equity and investment fund shares	34

AN.21	Natural resources	152	AF.6	Insurance, pension and standardised guarantee schemes	0
AN.22	Contracts, leases and licences	2	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	84			
AF.1	Monetary gold and SDRs	12			
AF.2	Currency and deposits	0			
AF.3	Debt securities	40			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	32			
AF.6	Insurance, pension and standardised guarantee schemes	0			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.103	Changes in net worth due to nominal holding gains/losses	288

III.3.2.1: Neutral holding gains/losses account

Changes in assets			**Changes in liabilities and net worth**		
K.71	Neutral holding gains (+)/losses (–)		K.71	Neutral holding gains (–)/losses (+)	
AN	Non-financial assets	198	AF	Liabilities	126
AN.1	Produced non-financial assets	121	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	111	AF.2	Currency and deposits	30
AN.12	Inventories	4	AF.3	Debt securities	26
AN.13	Valuables	6	AF.4	Loans	29
AN.2	Non-produced non-financial assets	77	AF.5	Equity and investment fund shares	28
AN.21	Natural resources	76	AF.6	Insurance, pension and standardised guarantee schemes	7
AN.22	Contracts, leases and licences	1	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	6
AF	Financial assets	136			
AF.1	Monetary gold and SDRs	16			
AF.2	Currency and deposits	30			
AF.3	Debt securities	25			
AF.4	Loans	28			
AF.5	Equity and investment fund shares	26			

Changes in assets			Changes in liabilities and net worth		
AF.6	Insurance, pension and standardised guarantee schemes	7			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	4			
			B.1031	**Changes in net worth due to neutral holding gains/losses**	208

III.3.2.2: Real holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.72	Real holding gains (+)/losses (–)		K.72	Real holding gains (–)/losses (+)	
AN	Non-financial assets	82	AF	Liabilities	–50
AN.1	Produced non-financial assets	5	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	0	AF.2	Currency and deposits	–30
AN.12	Inventories	3	AF.3	Debt securities	16
AN.13	Valuables	2	AF.4	Loans	–29
AN.2	Non-produced non-financial assets	77	AF.5	Equity and investment fund shares	6
AN.21	Natural resources	76	AF.6	Insurance, pension and standardised guarantee schemes	–7
AN.22	Contracts, leases and licences	1	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	–6
AF	Financial assets	–52			
AF.1	Monetary gold and SDRs	–4			
AF.2	Currency and deposits	–30			
AF.3	Debt securities	15			
AF.4	Loans	–28			
AF.5	Equity and investment fund shares	6			
AF.6	Insurance, pension and standardised guarantee schemes	–7			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	–4			
			B.1032	**Changes in net worth due to real holding gains/losses**	80

IV: Balance sheets
IV.1: Opening balance sheet

Assets			**Liabilities and net worth**		
AN	Non-financial assets	4 621	AF	Liabilities	7 762
AN.1	Produced non-financial assets	2 818	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	2 579	AF.2	Currency and deposits	1 471
AN.12	Inventories	114	AF.3	Debt securities	1 311
AN.13	Valuables	125	AF.4	Loans	1 437
AN.2	Non-produced non-financial assets	1 803	AF.5	Equity and investment fund shares	2 756
AN.21	Natural resources	1 781	AF.6	Insurance, pension and standardised guarantee schemes	471
AN.22	Contracts, leases and licences	22	AF.7	Financial derivatives and employee stock options	14
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	302
AF	Financial assets	8 231			
AF.1	Monetary gold and SDRs	770			
AF.2	Currency and deposits	1 482			
AF.3	Debt securities	1 263			
AF.4	Loans	1 384			
AF.5	Equity and investment fund shares	2 614			
AF.6	Insurance, pension and standardised guarantee schemes	470			
AF.7	Financial derivatives and employee stock options	21			
AF.8	Other accounts receivable/ payable	227			
			B.90	Net worth	5 090

IV.2: Changes in balance sheet

Assets			**Liabilities and net worth**		
Total changes in assets			Total changes in liabilities		
AN	Non-financial assets	482	AF	Liabilities	505
AN.1	Produced non-financial assets	294	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	246	AF.2	Currency and deposits	102
AN.12	Inventories	32	AF.3	Debt securities	116
AN.13	Valuables	16	AF.4	Loans	47
AN.2	Non-produced non-financial assets	186	AF.5	Equity and investment fund shares	141
AN.21	Natural resources	178	AF.6	Insurance, pension and standardised guarantee schemes	49
AN.22	Contracts, leases and licences	8	AF.7	Financial derivatives and employee stock options	11

Assets			Liabilities and net worth		
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	39
AF	Financial assets	523			
AF.1	Monetary gold and SDRs	11			
AF.2	Currency and deposits	89			
AF.3	Debt securities	126			
AF.4	Loans	78			
AF.5	Equity and investment fund shares	141			
AF.6	Insurance, pension and standardised guarantee schemes	49			
AF.7	Financial derivatives and employee stock options	14			
AF.8	Other accounts receivable/ payable	15			
			B.10	Changes in net worth	500
			B.101	Changes in net worth due to saving and capital transfers	202
			B.102	Changes in net worth due to other changes in volume of assets	10
			B.103	Changes in net worth due to nominal holding gains and losses	288
			B.1031	Changes in net worth due to neutral holding gains and losses	208
			B.1032	Changes in net worth due to real holding gains and losses	80

IV.3: Closing balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	5 101	AF	Liabilities	8 267
AN.1	Produced non-financial assets	3 112	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	2 825	AF.2	Currency and deposits	1 573
AN.12	Inventories	146	AF.3	Debt securities	1 427
AN.13	Valuables	141	AF.4	Loans	1 484
AN.2	Non-produced non-financial assets	1 989	AF.5	Equity and investment fund shares	2 897
AN.21	Natural resources	1 959	AF.6	Insurance, pension and standardised guarantee schemes	520
AN.22	Contracts, leases and licences	30	AF.7	Financial derivatives and employee stock options	25
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	341
AF	Financial assets	8 754			
AF.1	Monetary gold and SDRs	781			
AF.2	Currency and deposits	1 571			

Assets			Liabilities and net worth		
AF.3	Debt securities	1 389			
AF.4	Loans	1 462			
AF.5	Equity and investment fund shares	2 755			
AF.6	Insurance, pension and standardised guarantee schemes	519			
AF.7	Financial derivatives and employee stock options	35			
AF.8	Other accounts receivable/payable	242			
			B.90	Net worth	5 590

Table 24.3 — Full sequence of accounts for non-financial corporations

I: Production account

Uses			Resources		
P.2	Intermediate consumption	1 477	P.1	Output	2 808
			P.11	Market output	2 808
			P.12	Output for own final use	0
B.1g	**Value added, gross**	1 331			
P.51c	Consumption of fixed capital	157			
B.1n	**Value added, net**	1 174			

II: Distribution and use of income accounts
II.1: Primary distribution of income account
II.1.1: Generation of income account

Uses			Resources		
D.1	Compensation of employees	986	B.1g	**Value added, gross**	1 331
D.11	Wages and salaries	841	B.1n	**Value added, net**	1 174
D.12	Employers' social contributions	145			
D.121	Employers' actual social contributions	132			
D.1211	Employers' actual pension contributions	122			
D.1212	Employers' actual non-pension contributions	10			
D.122	Employers' imputed social contributions	13			
D.1221	Employers' imputed pension contributions	12			
D.1222	Employers' imputed non-pension contributions	1			
D.29	Other taxes on production	88			
D.39	Other subsidies on production	–35			
B.2g	**Operating surplus, gross**	292			
P.51c1	Consumption of fixed capital on gross operating surplus	157			
B.2n	**Operating surplus, net**	135			

II.1.2: Allocation of primary income account

Uses			Resources		
D.4	Property income	134	B.2g	**Operating surplus, gross**	292
D.41	Interest	56	B.2n	**Operating surplus, net**	135
D.42	Distributed income of corporations	47			
D.421	Dividends	39	D.4	Property income	96
D.422	Withdrawals from income of quasi-corporations	8	D.41	Interest	33

Uses			Resources		
D.43	Reinvested earnings on foreign direct investment	0	D.42	Distributed income of corporations	10
D.45	Rent	31	D.421	Dividends	10
			D.422	Withdrawals from income of quasi-corporations	
			D.43	Reinvested earnings on foreign direct investment	4
			D.44	Other investment income	8
			D.441	Investment income attributable to insurance policy holders	5
			D.442	Investment income payable on pension entitlements	
			D.443	Investment income attributable to collective investment fund shareholders	3
			D.4431	Dividends attributable to collective investment fund shareholders	1
			D.4432	Retained earnings attributable to collective investment fund shareholders	2
			D.45	Rent	41
B.5g	**Balance of primary incomes, gross**	254			
B.5n	**Balance of primary incomes, net**	97			

II.1.2.1: Entrepreneurial income account

Uses			Resources		
D.4	Property income	87	B.2g	**Operating surplus, gross**	292
D.41	Interest	56	B.2n	**Operating surplus, net**	135
D.45	Rent	31			
			D.4	Property income	96
			D.41	Interest	33
			D.42	Distributed income of corporations	10
			D.421	Dividends	10
			D.43	Reinvested earnings on foreign direct investment	4
			D.44	Other investment income	8
			D.441	Investment income attributable to insurance policy holders	5
			D.443	Investment income attributable to collective investment fund shareholders	3
			D.45	Rent	41
B.4g	**Entrepreneurial income, gross**	301			
B.4n	**Entrepreneurial income, net**	144			

II.1.2.2: Allocation of other primary income account

Uses			Resources		
D.4	Property income	47	B.4g	**Entrepreneurial income. gross**	301
D.42	Distributed income of corporations	47	B.4n	**Entrepreneurial income, net**	144
D.421	Dividends	39			
D.422	Withdrawals from income of quasi-corporations	8			
D.43	Reinvested earnings on foreign direct investment	0			
B.5g	**Balance of primary incomes, gross**	254			
B.5n	**Balance of primary incomes, net**	97			

II.2: Secondary distribution of income account

Uses			Resources		
Current transfers		98	B.5g	**Balance of primary incomes, gross**	254
D.5	Current taxes on income, wealth, etc.	24	B.5n	**Balance of primary incomes, net**	97
D.51	Taxes on income	20			
D.59	Other current taxes	4	Current transfers		72
			D.61	Net social contributions	66
D.62	Social benefits other than social transfers in kind	62	D.611	Employers' actual social contributions	31
D.622	Other social insurance benefits	62	D.6111	Employers' actual pension contributions	27
D.6221	Other social insurance pension benefits	49	D.6112	Employers' actual non-pension contributions	4
D.6222	Other social insurance non-pension benefits	13	D.612	Employers' imputed social contributions	12
			D.6121	Employers' imputed pension contributions	12
D.7	Other current transfers	12	D.6122	Employers' imputed non-pension contributions	0
D.71	Net non-life insurance premiums	8	D.613	Households' actual social contributions	25
D.711	Net non-life direct insurance premiums	8	D.6131	Households' actual pension contributions	19
D.75	Miscellaneous current transfers	4	D.6132	Households' actual non-pension contributions	6
D.751	Current transfers to NPISHs	1	D.61SC	Social insurance scheme service charges	2
D.759	Other miscellaneous current transfers	3			
			D.7	Other current transfers	6
			D.72	Non-life insurance claims	6
			D.721	Non-life direct insurance claims	6

Uses			Resources		
			D.75	Miscellaneous current transfers	0
B.6g	**Disposable income, gross**	228			
B.6n	**Disposable income, net**	71			

II.4: Use of income account
II.4.1: Use of disposable income account

Uses			Resources		
			B.6g	**Disposable income, gross**	228
D.8	Adjustment for the change in pension entitlements	0	B.6n	**Disposable income, net**	71
B.8g	**Saving, gross**	228			
B.8n	**Saving, net**	71			

III: Accumulation accounts
III.1: Capital account
III.1.1: Change in net worth due to saving and capital transfers account

Changes in assets			Changes in liabilities and net worth		
B.101	**Changes in net worth due to saving and capital transfers**	88	B.8n	**Saving, net**	71
			D.9r	Capital transfers, receivable	33
			D.92r	Investment grants, receivable	23
			D.99r	Other capital transfers, receivable	10
			D.9p	Capital transfers, payable	–16
			D.91p	Capital taxes, payable	0
			D.99p	Other capital transfers, payable	–16

III.1.2: Acquisition of non-financial assets account

Changes in assets			Changes in liabilities and net worth		
P.5g	Gross capital formation	308	B.101	**Changes in net worth due to saving and capital transfers**	88
P.5n	Net capital formation	151			
P.51g	Gross fixed capital formation	280			
P.511	Acquisitions less disposals of fixed assets	263			
P.5111	Acquisitions of new fixed assets	262			
P.5112	Acquisitions of existing fixed assets	5			
P.5113	Disposal of existing fixed assets	–4			
P.512	Costs of ownership transfer on non-produced assets	17			
P.51c	Consumption of fixed capital	–157			
P.52	Changes in inventories	26			
P.53	Acquisitions less disposals of valuables	2			

Changes in assets			Changes in liabilities and net worth		
NP	Acquisitions less disposals of non-produced assets	−7			
NP.1	Acquisitions less disposals of natural resources	−6			
NP.2	Acquisitions less disposals of contracts, leases and licences	−1			
NP.3	Purchases less sales of goodwill and marketing assets	0			
B.9	Net lending (+)/net borrowing (–)	−56			

III.2: Financial account

Change in assets			Change in liabilities and net worth		
			B.9	Net lending (+)/net borrowing (–)	−56
F	Net acquisition of financial assets	83	F	Net incurrence of liabilities	139
F.2	Currency and deposits	39	F.2	Currency and deposits	
F.21	Currency	5	F.21	Currency	
F.22	Transferable deposits	30	F.22	Transferable deposits	
F.229	Other transferable deposits	30	F.229	Other transferable deposits	
F.29	Other deposits	4	F.29	Other deposits	
F.3	Debt securities	7	F.3	Debt securities	6
F.31	Short-term	10	F.31	Short-term	2
F.32	Long-term	−3	F.32	Long-term	4
F.4	Loans	19	F.4	Loans	21
F.41	Short-term	14	F.41	Short-term	4
F.42	Long-term	5	F.42	Long-term	17
F.5	Equity and investment fund shares	10	F.5	Equity and investment fund shares	83
F.51	Equity	10	F.51	Equity	83
F.511	Listed shares	5	F.511	Listed shares	77
F.512	Unlisted shares	3	F.512	Unlisted shares	3
F.519	Other equity	2	F.519	Other equity	3
F.52	Investment fund shares/units	0	F.52	Investment fund shares/units	
F.521	Money market fund shares/units	0	F.521	Money market fund shares/units	
F.522	Non-MMF investment fund shares/units	0	F.522	Non-MMF investment fund shares/units	
F.6	Insurance, pension and standardised guarantee schemes	1	F.6	Insurance, pension and standardised guarantee schemes	
F.61	Non-life insurance technical reserves	1	F.61	Non-life insurance technical reserves	
F.62	Life insurance and annuity entitlements	0	F.62	Life insurance and annuity entitlements	
F.66	Provisions for calls under standardised guarantees	0	F.66	Provisions for calls under standardised guarantees	
F.7	Financial derivatives and employee stock options	3	F.7	Financial derivatives and employee stock options	3

Change in assets			Change in liabilities and net worth		
F.71	Financial derivatives	3	F.71	Financial derivatives	2
F.711	Options	1	F.711	Options	2
F.712	Forwards	2	F.712	Forwards	0
F.72	Employee stock options	0	F.72	Employee stock options	1
F.8	Other accounts receivable/ payable	4	F.8	Other accounts receivable/ payable	26
F.81	Trade credits and advances	3	F.81	Trade credits and advances	6
F.89	Other accounts receivable/ payable, excluding trade credits and advances	1	F.89	Other accounts receivable/ payable, excluding trade credits and advances	20

III.3: Other changes in assets accounts
III.3.1: Other changes in volume of assets account

Changes in assets			Changes in liabilities and net worth		
K.1	Economic appearance of assets	26	K.5	Other changes in volume n.e.c.	0
AN.1	Produced non-financial assets	0	AN.1	Produced assets	
AN.2	Non-produced non-financial assets	26	AN.2	Non-produced non-financial assets	
AN.21	Natural resources	22	AF	Financial assets/liabilities	0
AN.22	Contracts, leases and licences	4	K.6	Changes in classification	0
AN.23	Purchases less sales of goodwill and marketing assets	0	K.61	Changes in sector classification and structure	0
K.2	Economic disappearance of non-produced assets	−9	AN.1	Produced non-financial assets	
K.21	Depletion of natural resources	−6	AN.2	Non-produced non-financial assets	
AN.21	Natural resources	−6	AF	Financial assets/liabilities	0
K.22	Other economic disappearance of non-produced assets	−3	K.62	Changes in classification of assets and liabilities	0
AN.21	Natural resources	0	AN.1	Produced non-financial assets	
AN.22	Contracts, leases and licences	−1	AN.2	Non-produced non-financial assets	
AN.23	Purchases less sales of goodwill and marketing assets	−2	AF	Financial assets/liabilities	0
K.3	Catastrophic losses	−5	Total other changes in volume		0
AN.1	Produced non-financial assets	−5	AN.1	Produced non-financial assets	
AN.2	Non-produced non-financial assets	0	AN.11	Fixed assets	
AF	Financial assets/liabilities	0	AN.12	Inventories	
K.4	Uncompensated seizures	−5	AN.13	Valuables	
AN.1	Produced non-financial assets	−1	AN.2	Non-produced non-financial assets	
AN.2	Non-produced non-financial assets	−4	AN.21	Natural resources	

Changes in assets			Changes in liabilities and net worth		
AF	Financial assets	0	AN.22	Contracts, leases and licences	
K.5	Other changes in volume n.e.c.	1	AN.23	Purchases less sales of goodwill and marketing assets	
AN.1	Produced non-financial assets	1	AF	Financial assets	0
AN.2	Non-produced non-financial assets	0	AF.1	Monetary gold and SDRs	
AF	Financial assets/liabilities	0	AF.2	Currency and deposits	
K.6	Changes in classification	6	AF.3	Debt securities	
K.61	Changes in sector classification and structure	6	AF.4	Loans	
AN.1	Produced non-financial assets	3	AF.5	Equity and investment fund shares	
AN.2	Non-produced non-financial assets	1	AF.6	Insurance pension and standardised guarantee schemes	
AF	Financial assets/liabilities	2	AF.7	Financial derivatives and employee stock options	
K.62	Changes in classification of assets and liabilities	0	AF.8	Other accounts receivable/ payable	
AN.1	Produced non-financial assets	0			
AN.2	Non-produced non-financial assets	0			
AF	Financial assets/liabilities	0			
Total other changes in volume		14			
AN.1	Produced non-financial assets	–2			
AN.11	Fixed assets	1			
AN.12	Inventories	–3			
AN.13	Valuables	0			
AN.2	Non-produced non-financial assets	14			
AN.21	Natural resources	10			
AN.22	Contracts, leases and licences	4			
AN.23	Purchases less sales of goodwill and marketing assets	0			
AF	Financial assets	2			
AF.1	Monetary gold and SDRs	0			
AF.2	Currency and deposits	0			
AF.3	Debt securities	0			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	2			
AF.6	Insurance pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			

Changes in assets			Changes in liabilities and net worth		
AF.8	Other accounts receivable/ payable	0			
			B.102	**Changes in net worth due to other changes in volume of assets**	14

III.3.2: Revaluation account

Changes in assets			Changes in liabilities and net worth		
K.7	Nominal holding gains (+)/losses (–)		K.7	Nominal holding gains (–)/losses (+)	
AN	Non-financial assets	144	AF	Liabilities	18
AN.1	Produced non-financial assets	63	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	58	AF.2	Currency and deposits	
AN.12	Inventories	4	AF.3	Debt securities	1
AN.13	Valuables	1	AF.4	Loans	
AN.2	Non-produced non-financial assets	81	AF.5	Equity and investment fund shares	17
AN.21	Natural resources	80	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	1	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	8			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits				
AF.3	Debt securities	3			
AF.4	Loans				
AF.5	Equity and investment fund shares	5			
AF.6	Insurance, pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.103	**Changes in net worth due to nominal holding gains/losses**	134

III.3.2.1: Neutral holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.71	Neutral holding gains (+)/losses (–)		K.71	Neutral holding gains (–)/losses (+)	
AN	Non-financial assets	101	AF	Liabilities	37
AN.1	Produced non-financial assets	60	AF.1	Monetary gold and SDRs	

Changes in assets			Changes in liabilities and net worth		
AN.11	Fixed assets	58	AF.2	Currency and deposits	1
AN.12	Inventories	1	AF.3	Debt securities	1
AN.13	Valuables	1	AF.4	Loans	18
AN.2	Non-produced non-financial assets	41	AF.5	Equity and investment fund shares	14
AN.21	Natural resources	40	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	1	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	3
AF	Financial assets	18			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	8			
AF.3	Debt securities	2			
AF.4	Loans	1			
AF.5	Equity and investment fund shares	3			
AF.6	Insurance, pension and standardised guarantee schemes	1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	3			
			B.103	Changes in net worth due to neutral holding gains/losses	82

III.3.2.2: Real holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.72	Real holding gains (+)/losses (–)		K.72	Real holding gains (–)/losses (+)	
AN	Non-financial assets	43	AF	Liabilities	–19
AN.1	Produced non-financial assets	3	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	0	AF.2	Currency and deposits	–1
AN.12	Inventories	3	AF.3	Debt securities	0
AN.13	Valuables	0	AF.4	Loans	–18
AN.2	Non-produced non-financial assets	40	AF.5	Equity and investment fund shares	3
AN.21	Natural resources	40	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	–3
AF	Financial assets	–10			
AF.1	Monetary gold and SDRs				

Changes in assets			Changes in liabilities and net worth		
AF.2	Currency and deposits	–8			
AF.3	Debt securities	1			
AF.4	Loans	–1			
AF.5	Equity and investment fund shares	2			
AF.6	Insurance, pension and standardised guarantee schemes	–1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	–3			
			B.1032	**Changes in net worth due to real holding gains/losses**	52

IV: Balance sheets
IV.1: Opening balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	2 151	AF	Liabilities	3 221
AN.1	Produced non-financial assets	1 274	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	1 226	AF.2	Currency and deposits	40
AN.12	Inventories	43	AF.3	Debt securities	44
AN.13	Valuables	5	AF.4	Loans	897
AN.2	Non-produced non-financial assets	877	AF.5	Equity and investment fund shares	1 987
AN.21	Natural resources	864	AF.6	Insurance, pension and standardised guarantee schemes	12
AN.22	Contracts, leases and licences	13	AF.7	Financial derivatives and employee stock options	4
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	237
AF	Financial assets	982			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	382			
AF.3	Debt securities	90			
AF.4	Loans	50			
AF.5	Equity and investment fund shares	280			
AF.6	Insurance, pension and standardised guarantee schemes	25			
AF.7	Financial derivatives and employee stock options	5			
AF.8	Other accounts receivable/ payable	150			
			B.90	**Net worth**	–88

IV.2: Changes in balance sheet

Assets			**Liabilities and net worth**		
Total changes in assets			Total changes in liabilities		
AN	Non-financial assets	301	AF	Liabilities	157
AN.1	Produced non-financial assets	195	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	165	AF.2	Currency and deposits	0
AN.12	Inventories	27	AF.3	Debt securities	7
AN.13	Valuables	3	AF.4	Loans	21
AN.2	Non-produced non-financial assets	106	AF.5	Equity and investment fund shares	100
AN.21	Natural resources	101	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	5	AF.7	Financial derivatives and employee stock options	3
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	26
AF	Financial assets	93			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	39			
AF.3	Debt securities	10			
AF.4	Loans	19			
AF.5	Equity and investment fund shares	17			
AF.6	Insurance, pension and standardised guarantee schemes	1			
AF.7	Financial derivatives and employee stock options	3			
AF.8	Other accounts receivable/ payable	4			
			B.10	Changes in net worth	237
			B.101	Changes in net worth due to saving and capital transfers	88
			B.102	Changes in net worth due to other changes in volume of assets	14
			B.103	Changes in net worth due to nominal holding gains and losses	134
			B.1031	Changes in net worth due to neutral holding gains and losses	82
			B.1032	Changes in net worth due to real holding gains and losses	52

IV: Balance sheets
IV.3: Closing balance sheet

Assets			**Liabilities and net worth**		
AN	Non-financial assets	2 452	AF	Liabilities	3 378
AN.1	Produced non-financial assets	1 469	AF.1	Monetary gold and SDRs	

Assets			Liabilities and net worth		
AN.11	Fixed assets	1 391	AF.2	Currency and deposits	40
AN.12	Inventories	70	AF.3	Debt securities	51
AN.13	Valuables	8	AF.4	Loans	918
AN.2	Non-produced non-financial assets	983	AF.5	Equity and investment fund shares	2 087
AN.21	Natural resources	965	AF.6	Insurance, pension and standardised guarantee schemes	12
AN.22	Contracts, leases and licences	18	AF.7	Financial derivatives and employee stock options	7
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	263
AF	Financial assets	1 075			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	421			
AF.3	Debt securities	100			
AF.4	Loans	69			
AF.5	Equity and investment fund shares	297			
AF.6	Insurance, pension and standardised guarantee schemes	26			
AF.7	Financial derivatives and employee stock options	8			
AF.8	Other accounts receivable/ payable	154			
			B.90	Net worth	149

Table 24.4 — Full sequence of accounts for financial corporations

I: Production account

Uses			**Resources**		
P.2	Intermediate consumption	52	P.1	Output	146
			P.11	Market output	146
			P.12	Output for own final use	0
B.1g	**Value added, gross**	94			
P.51c	Consumption of fixed capital	12			
B.1n	**Value added, net**	82			

II: Distribution and use of income accounts
II.1: Primary distribution of income account
II.1.1: Generation of income account

Uses			**Resources**		
D.1	Compensation of employees	44	B.1g	**Value added, gross**	94
D.11	Wages and salaries	29	B.1n	**Value added, net**	82
D.12	Employers' social contributions	5			
D.121	Employers' actual social contributions	4			
D.1211	Employers' actual pension contributions	4			
D.1212	Employers' actual non-pension contributions	0			
D.122	Employers' imputed social contributions	1			
D.1221	Employers' imputed pension contributions	1			
D.1222	Employers' imputed non-pension contributions	0			
D.29	Other taxes on production	4			
D.39	Other subsidies on production	0			
B.2g	**Operating surplus, gross**	46			
P.51c1	Consumption of fixed capital on gross operating surplus	12			
B.2n	**Operating surplus, net**	34			

II.1.2: Allocation of primary income account

Uses			**Resources**		
D.4	Property income	168	B.2g	**Operating surplus, gross**	46
D.41	Interest	106	B.2n	**Operating surplus, net**	34
D.42	Distributed income of corporations	15			
D.421	Dividends	15	D.4	Property income	149
D.422	Withdrawals from income of quasi-corporations	0	D.41	Interest	106

Uses			Resources		
D.43	Reinvested earnings on foreign direct investment	0	D.42	Distributed income of corporations	25
D.44	Other investment income	47	D.421	Dividends	25
D.441	Investment income attributable to insurance policy holders		D.422	Withdrawals from income of quasi-corporations	0
		25	D.43	Reinvested earnings on foreign direct investment	7
D.442	Investment income payable on pension		D.44	Other investment income	8
	entitlements	8	D.441	Investment income attributable to insurance policy	
D.443	Investment income attributable to collective			holders	0
	investment fund shareholders	14	D.443	Investment income attributable to collective	
D.4431	Dividends attributable to collective			investment fund shareholders	8
	investment fund shareholders	6	D.4431	Dividends attributable to collective	
D.4432	Retained earnings attributable to collective			investment fund shareholders	3
	investment fund shareholders	8	D.4432	Retained earnings attributable to collective	
D.45	Rent	0		investment fund shareholders	5
			D.45	Rent	3
B.5g	**Balance of primary incomes, gross**	27			
B.5n	**Balance of primary incomes, net**	15			

II.1.2.1: Entrepreneurial income account

Uses			Resources		
D.4	Property income	153	B.2g	**Operating surplus, gross**	46
D.41	Interest	106	B.2n	**Operating surplus, net**	34
D.44	Other investment income	47			
D.441	Investment income attributable to insurance policy holders	25	D.4	Property income	149
D.442	Investment income payable on pension		D.41	Interest	106
	entitlements	8	D.42	Distributed income of corporations	25
D.443	Investment income attributable to collective		D.421	Dividends	25
	investment fund shareholders	14	D.422	Withdrawals from income of quasi-corporations	0
D.45	Rent	0	D.43	Reinvested earnings on foreign direct investment	7
			D.44	Other investment income	8

Uses			Resources		
			D.441	Investment income attributable to insurance policy holders	0
			D.442	Investment income payable on pension entitlements	
			D.443	Investment income attributable to collective investment fund shareholders	8
			D.45	Rent	3
B.4g	**Entrepreneurial income, gross**	42			
B.4n	**Entrepreneurial income, net**	30			

II.1.2.2: Allocation of other primary income account

Uses			Resources		
D.4	Property income	15	B.4g	**Entrepreneurial income, gross**	42
D.42	Distributed income of corporations	15	B.4n	**Entrepreneurial income, net**	30
D.421	Dividends	15			
D.422	Withdrawals from income of quasi-corporations	0			
D.43	Reinvested earnings on foreign direct investment	0			
B.5g	**Balance of primary incomes, gross**	27			
B.5n	**Balance of primary incomes, net**	15			

II.2: Secondary distribution of income account

Uses			Resources		
Current transfers		277	B.5g	**Balance of primary incomes, gross**	27
D.5	Current taxes on income, wealth, etc.	10	B.5n	**Balance of primary incomes, net**	15
D.51	Taxes on income	7			
D.59	Other current taxes	3	Current transfers		275
			D.61	Net social contributions	212
D.62	Social benefits other than social transfers in kind	205	D.611	Employers' actual social contributions	109
D.622	Other social insurance benefits	205	D.6111	Employers' actual pension contributions	104
D.6221	Other social insurance pension benefits	193	D.6112	Employers' actual non-pension contributions	5
D.6222	Other social insurance non-pension benefits	12	D.612	Employers' imputed social contributions	2
			D.6121	Employers' imputed pension contributions	1
D.7	Other current transfers	62	D.6122	Employers' imputed non-pension contributions	1

Uses			Resources		
D.71	Net non-life insurance premiums	13	D.613	Households' actual social contributions	94
D.711	Net non-life direct insurance premiums	0	D.6131	Households' actual pension contributions	90
D.712	Net non-life reinsurance premiums	13	D.6132	Households' actual non-pension contributions	4
D.72	Non-life insurance claims	48	D.614	Households' social contribution supplements	10
D.721	Non-life direct insurance claims	45	D.6141	Households' pension contribution supplements	8
D.722	Non-life reinsurance claims	3	D.6142	Households' non-pension contribution supplements	2
D.75	Miscellaneous current transfers	1	D.61SC	Social insurance scheme service charges	3
D.751	Current transfers to NPISHs	1			
D.759	Other miscellaneous current transfers	0	D.7	Other current transfers	62
			D.71	Net non-life insurance premiums	47
			D.711	Net non-life direct insurance premiums	44
			D.712	Net non-life reinsurance premiums	3
			D.72	Non-life insurance claims	15
			D.722	Non-life reinsurance claims	15
			D.75	Miscellaneous current transfers	0
B.6g	**Disposable income, gross**	25			
B.6n	**Disposable income, net**	13			

II.4: Use of income account
II.4.1: Use of disposable income account

Uses			Resources		
			B.6g	**Disposable income, gross**	25
D.8	Adjustment for the change in pension entitlements	11	B.6n	**Disposable income, net**	13
B.8g	**Saving, gross**	14			
B.8n	**Saving, net**	2			

III: Accumulation accounts
III.1: Capital account
III.1.1: Change in net worth due to saving and capital transfers account

Changes in assets			Changes in liabilities and net worth		
B.101	**Changes in net worth due to saving and capital transfers**	–5	B.8n	**Saving, net**	2
			D.9r	Capital transfers, receivable	0
			D.92r	Investment grants, receivable	0

Changes in assets			Changes in liabilities and net worth		
			D.99r	Other capital transfers, receivable	
			D.9p	Capital transfers, payable	–7
			D.91p	Capital taxes, payable	0
			D.99p	Other capital transfers, payable	–7

III.1.2: Acquisition of non-financial assets account

Changes in assets			Changes in liabilities and net worth		
P.5g	Gross capital formation	8	B.101	Changes in net worth due to saving and capital transfers	–5
P.5n	Net capital formation	–4			
P.51g	Gross fixed capital formation	8			
P.511	Acquisitions less disposals of fixed assets	8			
P.5111	Acquisitions of new fixed assets	8			
P.5112	Acquisitions of existing fixed assets	0			
P.5113	Disposal of existing fixed assets	0			
P.512	Costs of ownership transfer on non-produced assets	0			
P.51c	Consumption of fixed capital	–12			
P.52	Changes in inventories	0			
P.53	Acquisitions less disposals of valuables	0			
NP	Acquisitions less disposals of non-produced assets	0			
NP.1	Acquisitions less disposals of natural resources	0			
NP.2	Acquisitions less disposals of contracts, leases and licences	0			
NP.3	Purchases less sales of goodwill and marketing assets	0			
B.9	Net lending (+)/net borrowing (–)	–1			

III.2: Financial account

Changes in assets			Changes in liabilities and net worth		
			B.9	Net lending (+)/net borrowing (–)	–1
F	Net acquisition of financial assets	172	F	Net incurrence of liabilities	173
F.1	Monetary gold and SDRs	–1	F.1	Monetary gold and SDRs	0
F.11	Monetary gold	–1	F.11	Monetary gold	0
F.12	SDRs	0	F.12	SDRs	0
F.2	Currency and deposits	10	F.2	Currency and deposits	65
F.21	Currency	15	F.21	Currency	

Changes in assets			Changes in liabilities and net worth		
F.22	Transferable deposits	–5	F.22	Transferable deposits	26
F.221	Inter-bank positions	–5	F.221	Inter-bank positions	–5
F.229	Other transferable deposits	0	F.229	Other transferable deposits	31
F.29	Other deposits	0	F.29	Other deposits	39
F.3	Debt securities	66	F.3	Debt securities	30
F.31	Short-term	13	F.31	Short-term	18
F.32	Long-term	53	F.32	Long-term	12
F.4	Loans	53	F.4	Loans	0
F.41	Short-term	4	F.41	Short-term	0
F.42	Long-term	49	F.42	Long-term	0
F.5	Equity and investment fund shares	28	F.5	Equity and investment fund shares	22
F.51	Equity	25	F.51	Equity	11
F.511	Listed shares	23	F.511	Listed shares	7
F.512	Unlisted shares	1	F.512	Unlisted shares	4
F.519	Other equity	1	F.519	Other equity	0
F.52	Investment fund shares/units	3	F.52	Investment fund shares/units	11
F.521	Money market fund shares/units	2	F.521	Money market fund shares/units	5
F.522	Non-MMF investment fund shares/units	1	F.522	Non-MMF investment fund shares/units	6
F.6	Insurance, pension and standardised guarantee schemes	7	F.6	Insurance, pension and standardised guarantee schemes	48
F.61	Non-life insurance technical reserves	2	F.61	Non-life insurance technical reserves	7
F.62	Life insurance and annuity entitlements	0	F.62	Life insurance and annuity entitlements	22
F.63	Pension entitlements		F.63	Pension entitlements	11
F.64	Claim of pension fund on pension managers	3	F.64	Claim of pension fund on pension managers	3
F.65	Entitlements to non-pension benefits		F.65	Entitlements to non-pension benefits	2
F.66	Provisions for calls under standardised guarantees	2	F.66	Provisions for calls under standardised guarantees	3
F.7	Financial derivatives and employee stock options	8	F.7	Financial derivatives and employee stock options	8
F.71	Financial derivatives	8	F.71	Financial derivatives	7
F.711	Options	3	F.711	Options	2
F.712	Forwards	5	F.712	Forwards	5
F.72	Employee stock options	0	F.72	Employee stock options	1
F.8	Other accounts receivable/ payable	1	F.8	Other accounts receivable/ payable	0
F.81	Trade credits and advances		F.81	Trade credits and advances	0
F.89	Other accounts receivable/ payable, excluding trade credits and advances	1	F.89	Other accounts receivable/ payable, excluding trade credits and advances	0

III.3: Other changes in assets accounts
III.3.1: Other changes in volume of assets account

Changes in assets			**Changes in liabilities and net worth**		
K.1	Economic appearance of assets	0	K.5	Other changes in volume n.e.c.	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AF	Financial assets/liabilities	0
AN.22	Contracts, leases and licences	0	K.6	Changes in classification	0
AN.23	Purchases less sales of goodwill and marketing assets	0	K.61	Changes in sector classification and structure	0
K.2	Economic disappearance of non-produced assets	0	AN.1	Produced non-financial assets	0
K.21	Depletion of natural resources	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AF	Financial assets/liabilities	0
K.22	Other economic disappearance of non-produced assets	0	K.62	Changes in classification of assets and liabilities	0
AN.21	Natural resources	0	AN.1	Produced non-financial assets	0
AN.22	Contracts, leases and licences	0	AN.2	Non-produced non-financial assets	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF	Financial assets/liabilities	0
K.3	Catastrophic losses	0	Total other changes in volume		0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	
AN.2	Non-produced non-financial assets	0	AN.11	Fixed assets	
AF	Financial assets/liabilities	0	AN.12	Inventories	
K.4	Uncompensated seizures	0	AN.13	Valuables	
AN.1	Produced non-financial assets	0	AN.2	Non-produced non-financial assets	
AN.2	Non-produced non-financial assets	0	AN.21	Natural resources	
AF	Financial assets	0	AN.22	Contracts, leases and licences	
K.5	Other changes in volume n.e.c.	1	AN.23	Purchases less sales of goodwill and marketing assets	
AN.1	Produced non-financial assets	0	AF	Financial assets	0
AN.2	Non-produced non-financial assets	0	AF.1	Monetary gold and SDRs	
AF	Financial assets/liabilities	1	AF.2	Currency and deposits	
K.6	Changes in classification	–2	AF.3	Debt securities	
K.61	Changes in sector classification and structure	0	AF.4	Loans	
AN.1	Produced non-financial assets	0	AF.5	Equity and investment fund shares	
AN.2	Non-produced non-financial assets	0	AF.6	Insurance pension and standardised guarantee schemes	

Changes in assets			Changes in liabilities and net worth		
AF	Financial assets/liabilities	0	AF.7	Financial derivatives and employee stock options	
K.62	Changes in classification of assets and liabilities	–2	AF.8	Other accounts receivable/ payable	
AN.1	Produced non-financial assets	–2			
AN.2	Non-produced non-financial assets	0			
AF	Financial assets/liabilities	0			
Total other changes in volume		–1			
AN.1	Produced non-financial assets	–2			
AN.11	Fixed assets	0			
AN.12	Inventories	0			
AN.13	Valuables	–2			
AN.2	Non-produced non-financial assets	0			
AN.21	Natural resources	–2			
AN.22	Contracts, leases and licences	0			
AN.23	Purchases less sales of goodwill and marketing assets	0			
AF	Financial assets	1			
AF.1	Monetary gold and SDRs	0			
AF.2	Currency and deposits	0			
AF.3	Debt securities	0			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	0			
AF.6	Insurance pension and standardised guarantee schemes	1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.102	**Changes in net worth due to other changes in volume of assets**	–1

III.3.2: Revaluation account

Changes in assets			Changes in liabilities and net worth		
K.7	Nominal holding gains (+)/losses (–)		K.7	Nominal holding gains (–)/losses (+)	
AN	Non-financial assets	4	AF	Liabilities	51
AN.1	Produced non-financial assets	2	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	2	AF.2	Currency and deposits	
AN.12	Inventories	0	AF.3	Debt securities	34
AN.13	Valuables	0	AF.4	Loans	

Changes in assets			Changes in liabilities and net worth		
AN.2	Non-produced non-financial assets	2	AF.5	Equity and investment fund shares	17
AN.21	Natural resources	1	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	1	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	57			
AF.1	Monetary gold and SDRs	11			
AF.2	Currency and deposits				
AF.3	Debt securities	30			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	16			
AF.6	Insurance, pension and standardised guarantee schemes	0			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.103	Changes in net worth due to nominal holding gains/losses	10

III.3.2.1: Neutral holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.71	Neutral holding gains (+)/losses (–)		K.71	Neutral holding gains (–)/losses (+)	
AN	Non-financial assets	3	AF	Liabilities	68
AN.1	Produced non-financial assets	2	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	2	AF.2	Currency and deposits	26
AN.12	Inventories	0	AF.3	Debt securities	21
AN.13	Valuables	0	AF.4	Loans	0
AN.2	Non-produced non-financial assets	1	AF.5	Equity and investment fund shares	14
AN.21	Natural resources	1	AF.6	Insurance, pension and standardised guarantee schemes	7
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	71			
AF.1	Monetary gold and SDRs	14			
AF.2	Currency and deposits	0			
AF.3	Debt securities	18			

Changes in assets			Changes in liabilities and net worth		
AF.4	Loans	24			
AF.5	Equity and investment fund shares	14			
AF.6	Insurance, pension and standardised guarantee schemes	1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.103	Changes in net worth due to neutral holding gains/losses	6

III.3.2.2: Real holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.72	Real holding gains (+)/losses (–)		K.72	Real holding gains (–)/losses (+)	
AN	Non-financial assets	1	AF	Liabilities	–17
AN.1	Produced non-financial assets	0	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	0	AF.2	Currency and deposits	–26
AN.12	Inventories	0	AF.3	Debt securities	13
AN.13	Valuables	0	AF.4	Loans	0
AN.2	Non-produced non-financial assets	1	AF.5	Equity and investment fund shares	3
AN.21	Natural resources	0	AF.6	Insurance, pension and standardised guarantee schemes	–7
AN.22	Contracts, leases and licences	1	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	–14			
AF.1	Monetary gold and SDRs	–3			
AF.2	Currency and deposits	0			
AF.3	Debt securities	12			
AF.4	Loans	–24			
AF.5	Equity and investment fund shares	2			
AF.6	Insurance, pension and standardised guarantee schemes	–1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.1032	Changes in net worth due to real holding gains/losses	4

IV: Balance sheets

IV.1: Opening balance sheet

Assets			**Liabilities and net worth**		
AN	Non-financial assets	93	AF	Liabilities	3 544
AN.1	Produced non-financial assets	67	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	52	AF.2	Currency and deposits	1 281
AN.12	Inventories	0	AF.3	Debt securities	1 053
AN.13	Valuables	15	AF.4	Loans	
AN.2	Non-produced non-financial assets	26	AF.5	Equity and investment fund shares	765
AN.21	Natural resources	23	AF.6	Insurance, pension and standardised guarantee schemes	435
AN.22	Contracts, leases and licences	3	AF.7	Financial derivatives and employee stock options	10
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	3 421			
AF.1	Monetary gold and SDRs	690			
AF.2	Currency and deposits				
AF.3	Debt securities	950			
AF.4	Loans	1 187			
AF.5	Equity and investment fund shares	551			
AF.6	Insurance, pension and standardised guarantee schemes	30			
AF.7	Financial derivatives and employee stock options	13			
AF.8	Other accounts receivable/ payable	0			
			B.90	Net worth	–30

IV.2: Changes in balance sheet

Assets			**Liabilities and net worth**		
	Total changes in assets			Total changes in liabilities	
AN	Non-financial assets	–4	AF	Liabilities	224
AN.1	Produced non-financial assets	–4	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	–2	AF.2	Currency and deposits	65
AN.12	Inventories	0	AF.3	Debt securities	64
AN.13	Valuables	–2	AF.4	Loans	0
AN.2	Non-produced non-financial assets	0	AF.5	Equity and investment fund shares	39
AN.21	Natural resources	–1	AF.6	Insurance, pension and standardised guarantee schemes	48
AN.22	Contracts, leases and licences	1	AF.7	Financial derivatives and employee stock options	8

Assets			Liabilities and net worth		
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	230			
AF.1	Monetary gold and SDRs	10			
AF.2	Currency and deposits	10			
AF.3	Debt securities	96			
AF.4	Loans	53			
AF.5	Equity and investment fund shares	44			
AF.6	Insurance, pension and standardised guarantee schemes	8			
AF.7	Financial derivatives and employee stock options	8			
AF.8	Other accounts receivable/ payable	1			
			B.10	Changes in net worth	2
			B.101	Changes in net worth due to saving and capital transfers	–5
			B.102	Changes in net worth due to other changes in volume of assets	–1
			B.103	Changes in net worth due to nominal holding gains and losses	10
			B.1031	Changes in net worth due to neutral holding gains and losses	6
			B.1032	Changes in net worth due to real holding gains and losses	4

IV: Balance sheets
IV.3: Closing balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	89	AF	Liabilities	3 768
AN.1	Produced non-financial assets	63	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	50	AF.2	Currency and deposits	1 346
AN.12	Inventories	0	AF.3	Debt securities	1 117
AN.13	Valuables	13	AF.4	Loans	0
AN.2	Non-produced non-financial assets	26	AF.5	Equity and investment fund shares	804
AN.21	Natural resources	22	AF.6	Insurance, pension and standardised guarantee schemes	483
AN.22	Contracts, leases and licences	4	AF.7	Financial derivatives and employee stock options	18
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	3 651			
AF.1	Monetary gold and SDRs	700			

Assets			Liabilities and net worth		
AF.2	Currency and deposits	10			
AF.3	Debt securities	1 046			
AF.4	Loans	1 240			
AF.5	Equity and investment fund shares	595			
AF.6	Insurance, pension and standardised guarantee schemes	38			
AF.7	Financial derivatives and employee stock options	21			
AF.8	Other accounts receivable/ payable	1			
			B.90	Net worth	–28

Table 24.5 — Full sequence of accounts for general government

I: Production account

Uses			**Resources**		
P.2	Intermediate consumption	222	P.1	Output	348
			P.11	Market output	0
			P.12	Output for own final use	0
			P.13	Non-market output	348
B.1g	**Value added, gross**	126			
P.51c	Consumption of fixed capital	27			
B.1n	**Value added, net**	99			

II: Distribution and use of income accounts
II.1: Primary distribution of income account
II.1.1: Generation of income account

Uses			**Resources**		
D.1	Compensation of employees	98	B.1g	**Value added, gross**	126
D.11	Wages and salaries	63	B.1n	**Value added, net**	99
D.12	Employers' social contributions	55			
D.121	Employers' actual social contributions	51			
D.1211	Employers' actual pension contributions	48			
D.1212	Employers' actual non-pension contributions	3			
D.122	Employers' imputed social contributions	4			
D.1221	Employers' imputed pension contributions	4			
D.1222	Employers' imputed non-pension contributions	0			
D.29	Other taxes on production	1			
D.39	Other subsidies on production	0			
B.2g	**Operating surplus, gross**	27			
P.51c1	Consumption of fixed capital on gross operating surplus	27			
B.2n	**Operating surplus, net**	0			

II.1.2: Allocation of primary income account

Uses			**Resources**		
D.4	Property income	42	B.2g	**Operating surplus, gross**	27
D.41	Interest	35	B.2n	**Operating surplus, net**	0
D.45	Rent	7			
			D.2	Taxes on production and imports	235

Uses			Resources		
			D.21	Taxes on products	141
			D.211	Value added type taxes (VAT)	121
			D.212	Taxes and duties on imports excluding VAT	17
			D.2121	Import duties	17
			D.2122	Taxes on imports excluding VAT and duties	0
			D.214	Taxes on products except VAT and import taxes	3
			D.29	Other taxes on production	94
			D.3	Subsidies	−44
			D.31	Subsidies on products	−8
			D.311	Import subsidies	0
			D.319	Other subsidies on products	−8
			D.39	Other subsidies on production	−36
			D.4	Property income	22
			D.41	Interest	14
			D.42	Distributed income of corporations	7
			D.421	Dividends	5
			D.422	Withdrawals from income of quasi-corporations	2
			D.43	Reinvested earnings on foreign direct investment	0
			D.44	Other investment income	1
			D.441	Investment income attributable to insurance policy holders	0
			D.442	Investment income payable on pension entitlements	
			D.443	Investment income attributable to collective investment fund shareholders	1
			D.4431	Dividends attributable to collective investment fund shareholders	0
			D.4432	Retained earnings attributable to collective investment fund shareholders	1
			D.45	Rent	0
B.5g	**Balance of primary incomes, gross**	198			
B.5n	**Balance of primary incomes, net**	171			

II.2: Secondary distribution of income account

Uses			**Resources**		
Current transfers		248	B.5g	**Balance of primary incomes, gross**	198
D.5	Current taxes on income, wealth, etc.	0	B.5n	**Balance of primary incomes, net**	171
D.51	Taxes on income	0			
D.59	Other current taxes	0	Current transfers		367
			D.5	Current taxes on income, wealth, etc.	213
D.62	Social benefits other than social transfers in kind	112	D.51	Taxes on income	204
D.621	Social security benefits in cash	53	D.59	Other current taxes	9
D.6211	Social security pension benefits in cash	45			
D.6212	Social security non-pension benefits in cash	8	D.61	Net social contributions	50
D.622	Other social insurance benefits	7	D.611	Employers' actual social contributions	38
D.6221	Other social insurance pension benefits	5	D.6111	Employers' actual pension contributions	35
D.6222	Other social insurance non-pension benefits	2	D.6112	Employers' actual non-pension contributions	3
D.623	Social assistance benefits in cash	52	D.612	Employers' imputed social contributions	4
			D.6121	Employers' imputed pension contributions	4
D.7	Other current transfers	136	D.6122	Employers' imputed non-pension contributions	0
D.71	Net non-life insurance premiums	4	D.613	Households' actual social contributions	9
D.711	Net non-life direct insurance premiums	4	D.6131	Households' actual pension contributions	6
D.712	Net non-life reinsurance premiums		D.6132	Households' actual non-pension contributions	3
D.72	Non-life insurance claims				
D.721	Non-life direct insurance claims		D.7	Other current transfers	104
D.722	Non-life reinsurance claims		D.71	Net non-life insurance premiums	
D.73	Current transfers within general government	96	D.711	Net non-life direct insurance premiums	
D.74	Current international cooperation	22	D.712	Net non-life reinsurance premiums	
D.75	Miscellaneous current transfers	5	D.72	Non-life insurance claims	1
D.751	Current transfers to NPISHs	5	D.721	Non-life direct insurance claims	1
D.752	Current transfers between households		D.722	Non-life reinsurance claims	
D.759	Other miscellaneous current transfers	0	D.73	Current transfers within general government	96

Uses			Resources		
D.76	VAT- and GNI-based EU own resources	9	D.74	Current international cooperation	1
			D.75	Miscellaneous current transfers	6
			D.751	Current transfers to NPISHs	
			D.752	Current transfers between households	
			D.759	Other miscellaneous current transfers	6
B.6g	**Disposable income, gross**	317			
B.6n	**Disposable income, net**	290			

II.3: Redistribution of income in kind account

Uses			Resources		
D.63	Social transfers in kind	184	B.6g	**Disposable income, gross**	317
D.631	Social transfers in kind — non-market production	180	B.6n	**Disposable income, net**	290
D.632	Social transfers in kind — purchased market production	4			
B.7g	**Adjusted disposable income, gross**	133			
B.7n	**Adjusted disposable income, net**	106			

II.4: Use of income account
II.4.1: Use of disposable income account

Uses			Resources		
			B.6g	**Disposable income, gross**	317
P.3	Final consumption expenditure	352	B.6n	**Disposable income, net**	290
P.31	Individual consumption expenditure	184			
P.32	Collective consumption expenditure	168			
D.8	Adjustment for the change in pension entitlements	0			
B.8g	**Saving, gross**	–35			
B.8n	**Saving, net**	–62			

II.4.2: Use of adjusted disposable income account

Uses			Resources		
			B.7g	**Adjusted disposable income, gross**	133
P.4	Actual final consumption	168	B.7n	**Adjusted disposable income, net**	106
P.41	Actual individual consumption				

Uses			Resources		
P.42	Actual collective consumption	168			
D.8	Adjustment for the change in pension entitlements	0			
B.8g	**Saving, gross**	–35			
B.8n	**Saving, net**	–62			

III: Accumulation accounts
III.1: Capital account
III.1.1: Change in net worth due to saving and capital transfers account

Changes in assets			Changes in liabilities and net worth		
B.101	**Changes in net worth due to saving and capital transfers**	–90	B.8n	**Saving, net**	–62
			D.9r	Capital transfers, receivable	6
			D.91r	Capital taxes, receivable	2
			D.92r	Investment grants, receivable	0
			D.99r	Other capital transfers, receivable	4
			D.9p	Capital transfers, payable	–34
			D.91p	Capital taxes, payable	0
			D.92p	Investment grants, payable	–27
			D.99p	Other capital transfers, payable	–7

III.1.2: Acquisition of non-financial assets account

Changes in assets			Changes in liabilities and net worth		
P.5g	Gross capital formation	38	B.101	**Changes in net worth due to saving and capital transfers**	–90
P.5n	Net capital formation	11			
P.51g	Gross fixed capital formation	35			
P.511	Acquisitions less disposals of fixed assets	35			
P.5111	Acquisitions of new fixed assets	38			
P.5112	Acquisitions of existing fixed assets	0			
P.5113	Disposal of existing fixed assets	–3			
P.512	Costs of ownership transfer on non-produced assets				
P.51c	Consumption of fixed capital	–27			
P.52	Changes in inventories	0			
P.53	Acquisitions less disposals of valuables	3			
NP	Acquisitions less disposals of non-produced assets	2			
NP.1	Acquisitions less disposals of natural resources	2			

Changes in assets			Changes in liabilities and net worth		
NP.2	Acquisitions less disposals of contracts, leases and licences	0			
NP.3	Purchases less sales of goodwill and marketing assets				
B.9	**Net lending (+)/net borrowing (–)**	–103			

III.2: Financial account

Changes in assets			Changes in liabilities and net worth		
			B.9	**Net lending (+)/net borrowing (–)**	–103
F	Net acquisition of financial assets	–10	F	Net incurrence of liabilities	93
F.1	Monetary gold and SDRs		F.1	Monetary gold and SDRs	
F.11	Monetary gold		F.11	Monetary gold	
F.12	SDRs		F.12	SDRs	
F.2	Currency and deposits	–26	F.2	Currency and deposits	37
F.21	Currency	2	F.21	Currency	35
F.22	Transferable deposits	–27	F.22	Transferable deposits	2
F.221	Inter-bank positions		F.221	Inter-bank positions	
F.229	Other transferable deposits	–27	F.229	Other transferable deposits	2
F.29	Other deposits	–1	F.29	Other deposits	0
F.3	Debt securities	4	F.3	Debt securities	38
F.31	Short-term	1	F.31	Short-term	4
F.32	Long-term	3	F.32	Long-term	34
F.4	Loans	3	F.4	Loans	9
F.41	Short-term	1	F.41	Short-term	3
F.42	Long-term	2	F.42	Long-term	6
F.5	Equity and investment fund shares	3	F.5	Equity and investment fund shares	
F.51	Equity	3	F.51	Equity	
F.511	Listed shares	1	F.511	Listed shares	
F.512	Unlisted shares	1	F.512	Unlisted shares	
F.519	Other equity	1	F.519	Other equity	
F.52	Investment fund shares/units	0	F.52	Investment fund shares/units	
F.521	Money market fund shares/units	0	F.521	Money market fund shares/units	
F.522	Non-MMF investment fund shares/units	0	F.522	Non-MMF investment fund shares/units	
F.6	Insurance, pension and standardised guarantee schemes	1	F.6	Insurance, pension and standardised guarantee schemes	0
F.61	Non-life insurance technical reserves	0	F.61	Non-life insurance technical reserves	
F.62	Life insurance and annuity entitlements	0	F.62	Life insurance and annuity entitlements	

Changes in assets			Changes in liabilities and net worth		
F.63	Pension entitlements		F.63	Pension entitlements	
F.64	Claim of pension fund on pension managers		F.64	Claim of pension fund on pension managers	
F.65	Entitlements to non-pension benefits		F.65	Entitlements to non-pension benefits	
F.66	Provisions for calls under standardised guarantees	1	F.66	Provisions for calls under standardised guarantees	0
F.7	Financial derivatives and employee stock options	0	F.7	Financial derivatives and employee stock options	0
F.71	Financial derivatives	0	F.71	Financial derivatives	0
F.711	Options	0	F.711	Options	0
F.712	Forwards	0	F.712	Forwards	0
F.72	Employee stock options	0	F.72	Employee stock options	0
F.8	Other accounts receivable/ payable	5	F.8	Other accounts receivable/ payable	9
F.81	Trade credits and advances	1	F.81	Trade credits and advances	6
F.89	Other accounts receivable/ payable, excluding trade credits and advances	4	F.89	Other accounts receivable/ payable, excluding trade credits and advances	3

III.3: Other changes in assets accounts
III.3.1: Other changes in volume of assets account

Changes in assets			Changes in liabilities and net worth		
K.1	Economic appearance of assets	7	K.5	Other changes in volume n.e.c.	0
AN.1	Produced non-financial assets	3	AN.1	Produced non-financial assets	
AN.2	Non-produced non-financial assets	4	AN.2	Non-produced non-financial assets	
AN.21	Natural resources	4	AF	Financial assets/liabilities	0
AN.22	Contracts, leases and licences	0	K.6	Changes in classification	2
AN.23	Purchases less sales of goodwill and marketing assets	0	K.61	Changes in sector classification and structure	2
K.2	Economic disappearance of non-produced assets	−2	AN.1	Produced non-financial assets	0
K.21	Depletion of natural resources	−2	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	−2	AF	Financial assets/liabilities	2
K.22	Other economic disappearance of non-produced assets	0	K.62	Changes in classification of assets and liabilities	0
AN.21	Natural resources	0	AN.1	Produced non-financial assets	0
AN.22	Contracts, leases and licences	0	AN.2	Non-produced non-financial assets	0
AN.23	Purchases less sales of goodwill and marketing assets		AF	Financial assets/liabilities	0
K.3	Catastrophic losses	−6	Total other changes in volume		2
AN.1	Produced non-financial assets	−4	AN.1	Produced non-financial assets	

Changes in assets			Changes in liabilities and net worth		
AN.2	Non-produced non-financial assets	–2	AN.11	Fixed assets	
AF	Financial assets/liabilities	0	AN.12	Inventories	
K.4	Uncompensated seizures	5	AN.13	Valuables	
AN.1	Produced non-financial assets	1	AN.2	Non-produced non-financial assets	
AN.2	Non-produced non-financial assets	4	AN.21	Natural resources	
AF	Financial assets	0	AN.22	Contracts, leases and licences	
K.5	Other changes in volume n.e.c.	0	AN.23	Purchases less sales of goodwill and marketing assets	
AN.1	Produced non-financial assets	0	AF	Financial assets	2
AN.2	Non-produced non-financial assets	0	AF.1	Monetary gold and SDRs	
AF	Financial assets/liabilities	0	AF.2	Currency and deposits	
K.6	Changes in classification	–4	AF.3	Debt securities	
K.61	Changes in sector classification and structure	–4	AF.4	Loans	0
AN.1	Produced non-financial assets	–3	AF.5	Equity and investment fund shares	2
AN.2	Non-produced non-financial assets	–1	AF.6	Insurance pension and standardised guarantee schemes	
AF	Financial assets/liabilities	0	AF.7	Financial derivatives and employee stock options	
K.62	Changes in classification of assets and liabilities	0	AF.8	Other accounts receivable/ payable	
AN.1	Produced non-financial assets	0			
AN.2	Non-produced non-financial assets	0			
AF	Financial assets/liabilities	0			
Total other changes in volume		0			
AN.1	Produced non-financial assets	–3			
AN.11	Fixed assets	–3			
AN.12	Inventories	0			
AN.13	Valuables	0			
AN.2	Non-produced non-financial assets	3			
AN.21	Natural resources	1			
AN.22	Contracts, leases and licences	2			
AN.23	Purchases less sales of goodwill and marketing assets				
AF	Financial assets	0			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits				

Changes in assets			Changes in liabilities and net worth		
AF.3	Debt securities				
AF.4	Loans				
AF.5	Equity and investment fund shares				
AF.6	Insurance pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.102	**Changes in net worth due to other changes in volume of assets**	−2

III.3.2: Revaluation account

Changes in assets			Changes in liabilities and net worth		
K.7	Nominal holding gains (+)/ losses(–)		K.7	Nominal holding gains(–)/ losses(+)	
AN	Non-financial assets	44	AF	Liabilities	7
AN.1	Produced non-financial assets	21	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	18	AF.2	Currency and deposits	0
AN.12	Inventories	1	AF.3	Debt securities	7
AN.13	Valuables	2	AF.4	Loans	0
AN.2	Non-produced non-financial assets	23	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	23	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	1			
AF.1	Monetary gold and SDRs	1			
AF.2	Currency and deposits	0			
AF.3	Debt securities	0			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	0			
AF.6	Insurance, pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.103	**Changes in net worth due to nominal holding gains/losses**	38

III.3.2.1: Neutral holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.71	Neutral holding gains (+)/losses (–)		K.71	Neutral holding gains (–)/losses (+)	
AN	Non-financial assets	32	AF	Liabilities	13
AN.1	Produced non-financial assets	20	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	18	AF.2	Currency and deposits	2
AN.12	Inventories	1	AF.3	Debt securities	4
AN.13	Valuables	1	AF.4	Loans	7
AN.2	Non-produced non-financial assets	12	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	12	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets		AF.8	Other accounts receivable/ payable	0
AF	Financial assets	8			
AF.1	Monetary gold and SDRs	2			
AF.2	Currency and deposits	3			
AF.3	Debt securities	0			
AF.4	Loans	3			
AF.5	Equity and investment fund shares	0			
AF.6	Insurance, pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.1031	**Changes in net worth due to neutral holding gains/losses**	27

III.3.2.2: Real holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.72	Real holding gains (+)/losses (–)		K.72	Real holding gains (–)/losses (+)	
AN	Non-financial assets	12	AF	Liabilities	–6
AN.1	Produced non-financial assets	1	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	0	AF.2	Currency and deposits	–2
AN.12	Inventories	0	AF.3	Debt securities	3
AN.13	Valuables	1	AF.4	Loans	–7
AN.2	Non-produced non-financial assets	11	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	11	AF.6	Insurance, pension and standardised guarantee schemes	

Changes in assets			Changes in liabilities and net worth		
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets		AF.8	Other accounts receivable/ payable	0
AF	Financial assets	–7			
AF.1	Monetary gold and SDRs	–1			
AF.2	Currency and deposits	–3			
AF.3	Debt securities	0			
AF.4	Loans	–3			
AF.5	Equity and investment fund shares	0			
AF.6	Insurance, pension and standardised guarantee schemes	0			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.1032	**Changes in net worth due to real holding gains/losses**	11

IV: Balance sheets
IV.1: Opening balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	789	AF	Liabilities	687
AN.1	Produced non-financial assets	497	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	467	AF.2	Currency and deposits	102
AN.12	Inventories	22	AF.3	Debt securities	212
AN.13	Valuables	8	AF.4	Loans	328
AN.2	Non-produced non-financial assets	292	AF.5	Equity and investment fund shares	4
AN.21	Natural resources	286	AF.6	Insurance, pension and standardised guarantee schemes	19
AN.22	Contracts, leases and licences	6	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets		AF.8	Other accounts receivable/ payable	22
AF	Financial assets	396			
AF.1	Monetary gold and SDRs	80			
AF.2	Currency and deposits	150			
AF.3	Debt securities	0			
AF.4	Loans	115			
AF.5	Equity and investment fund shares	12			
AF.6	Insurance, pension and standardised guarantee schemes	20			

Assets			Liabilities and net worth		
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	19			
			B.90	**Net worth**	498

IV.2: Changes in balance sheet

Assets			Liabilities and net worth		
	Total changes in assets			Total changes in liabilities	
AN	Non-financial assets	57	AF	Liabilities	102
AN.1	Produced non-financial assets	29	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	23	AF.2	Currency and deposits	37
AN.12	Inventories	1	AF.3	Debt securities	45
AN.13	Valuables	5	AF.4	Loans	9
AN.2	Non-produced non-financial assets	28	AF.5	Equity and investment fund shares	2
AN.21	Natural resources	26	AF.6	Insurance, pension and standardised guarantee schemes	0
AN.22	Contracts, leases and licences	2	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets		AF.8	Other accounts receivable/ payable	9
AF	Financial assets	–9			
AF.1	Monetary gold and SDRs	1			
AF.2	Currency and deposits	–26			
AF.3	Debt securities	4			
AF.4	Loans	3			
AF.5	Equity and investment fund shares	3			
AF.6	Insurance, pension and standardised guarantee schemes	1			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	5			
			B.10	**Changes in net worth**	–54
			B.101	Changes in net worth due to saving and capital transfers	90
			B.102	Changes in net worth due to other changes in volume of assets	–2
			B.103	Changes in net worth due to nominal holding gains and losses	38
			B.1031	Changes in net worth due to neutral holding gains and losses	27
			B.1032	Changes in net worth due to real holding gains and losses	11

IV: Balance sheets
IV.3: Closing balance sheet

Assets			**Liabilities and net worth**		
AN	Non-financial assets	846	AF	Liabilities	789
AN.1	Produced non-financial assets	526	AF.1	Monetary gold and SDRs	0
AN.11	Fixed assets	490	AF.2	Currency and deposits	139
AN.12	Inventories	23	AF.3	Debt securities	257
AN.13	Valuables	13	AF.4	Loans	337
AN.2	Non-produced non-financial assets	320	AF.5	Equity and investment fund shares	6
AN.21	Natural resources	312	AF.6	Insurance, pension and standardised guarantee schemes	19
AN.22	Contracts, leases and licences	8	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	31
AF	Financial assets	387			
AF.1	Monetary gold and SDRs	81			
AF.2	Currency and deposits	124			
AF.3	Debt securities	4			
AF.4	Loans	118			
AF.5	Equity and investment fund shares	15			
AF.6	Insurance, pension and standardised guarantee schemes	21			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	24			
			B.90	Net worth	444

Table 24.6 — Full sequence of accounts for households

I: Production account

Uses			Resources		
P.2	Intermediate consumption	115	P.1	Output	270
			P.11	Market output	123
			P.12	Output for own final use	147
B.1g	**Value added, gross**	155			
P.51c	Consumption of fixed capital	23			
B.1n	**Value added, net**	132			

II: Distribution and use of income accounts
II.1: Primary distribution of income account
II.1.1: Generation of income account

Uses			Resources		
D.1	Compensation of employees	11	B.1g	**Value added, gross**	155
D.11	Wages and salaries	11	B.1n	**Value added, net**	132
D.12	Employers' social contributions	0			
D.121	Employers' actual social contributions	0			
D.1211	Employers' actual pension contributions	0			
D.1212	Employers' actual non-pension contributions	0			
D.122	Employers' imputed social contributions	0			
D.1221	Employers' imputed pension contributions	0			
D.1222	Employers' imputed non-pension contributions	0			
D.29	Other taxes on production	0			
D.39	Other subsidies on production	–1			
B.2g	**Operating surplus, gross**	84			
B.3g	**Mixed income, gross**	61			
P.51c1	Consumption of fixed capital on gross operating surplus	15			
P.51c2	Consumption of fixed capital on gross mixed income	8			
B.2n	**Operating surplus, net**	69			
B.3n	**Mixed income, net**	53			

II.1.2: Allocation of primary income account

Uses			Resources		
D.4	Property income	41	B.2g	**Operating surplus, gross**	84
D.41	Interest	14	B.3g	**Mixed income, gross**	61

Uses			Resources		
D.45	Rent	27	B.2n	**Operating surplus, net**	69
			B.3n	**Mixed income, net**	53
			D.1	Compensation of employees	1 154
			D.11	Wages and salaries	954
			D.12	Employers' social contributions	200
			D.121	Employers' actual social contributions	181
			D.1211	Employers' actual pension contributions	168
			D.1212	Employers' actual non-pension contributions	13
			D.122	Employers' imputed social contributions	19
			D.1221	Employers' imputed pension contributions	18
			D.1222	Employers' imputed non-pension contributions	1
			D.4	Property income	123
			D.41	Interest	49
			D.42	Distributed income of corporations	20
			D.421	Dividends	13
			D.422	Withdrawals from income of quasi-corporations	7
			D.43	Reinvested earnings on foreign direct investment	3
			D.44	Other investment income	30
			D.441	Investment income attributable to insurance policy holders	20
			D.442	Investment income payable on pension entitlements	8
			D.443	Investment income attributable to collective investment fund shareholders	2
			D.4431	Dividends attributable to collective investment fund shareholders	2
			D.4432	Retained earnings attributable to collective investment fund shareholders	0
			D.45	Rent	21
B.5g	**Balance of primary incomes, gross**	1 381			
B.5n	**Balance of primary incomes, net**	1 358			

II.2: Secondary distribution of income account

Uses			**Resources**		
Current transfers		582	B.5g	**Balance of primary incomes, gross**	1 381
D.5	Current taxes on income, wealth, etc.	178	B.5n	**Balance of primary incomes, net**	1 358
D.51	Taxes on income	176			
D.59	Other current taxes	2	Current transfers		420
D.61	Net social contributions	333	D.61	Net social contributions	0
D.611	Employers' actual social contributions	181	D.611	Employers' actual social contributions	0
D.6111	Employers' actual pension contributions	168	D.6111	Employers' actual pension contributions	0
D.6112	Employers' actual non-pension contributions	13	D.6112	Employers' actual non-pension contributions	0
D.612	Employers' imputed social contributions	19	D.612	Employers' imputed social contributions	0
D.6121	Employers' imputed pension contributions	18	D.6121	Employers' imputed pension contributions	0
D.6122	Employers' imputed non-pension contributions	1	D.6122	Employers' imputed non-pension contributions	0
D.613	Households' actual social contributions	129	D.613	Households' actual social contributions	0
D.6131	Households' actual pension contributions	115	D.6131	Households' actual pension contributions	0
D.6132	Households' actual non-pension contributions	14	D.6132	Households' actual non-pension contributions	0
D.614	Households' social contribution supplements	10	D.614	Households' social contribution supplements	0
D.6141	Households' pension contribution supplements	8	D.6141	Households' pension contribution supplements	0
D.6142	Households' non-pension contribution supplements	2	D.6142	Households' non-pension contribution supplements	0
D.61SC	Social insurance scheme service charges	–6	D.61SC	Social insurance scheme service charges	1
D.62	Social benefits other than social transfers in kind	0	D.62	Social benefits other than social transfers in kind	384
D.622	Other social insurance benefits	0	D.621	Social security benefits in cash	53
D.6221	Other social insurance pension benefits	0	D.6211	Social security pension benefits in cash	45
D.6222	Other social insurance non-pension benefits	0	D.6212	Social security non-pension benefits in cash	8
			D.622	Other social insurance benefits	279
D.7	Other current transfers	71	D.6221	Other social insurance pension benefits	250
D.71	Net non-life insurance premiums	31	D.6222	Other social insurance non-pension benefits	29

Uses			Resources		
D.711	Net non-life direct insurance premiums	31	D.623	Social assistance benefits in cash	52
D.75	Miscellaneous current transfers	40	D.7	Other current transfers	36
D.751	Current transfers to NPISHs	29	D.72	Non-life insurance claims	35
D.752	Current transfers between households	7	D.721	Non-life direct insurance claims	35
D.759	Other miscellaneous current transfers	4	D.75	Miscellaneous current transfers	1
			D.751	Current transfers to NPISHs	0
			D.752	Current transfers between households	1
			D.759	Other miscellaneous current transfers	0
B.6g	**Disposable income, gross**	1 219			
B.6n	**Disposable income, net**	1 196			

II.3: Redistribution of income in kind account

Uses			Resources		
			B.6g	**Disposable income, gross**	1 219
			B.6n	**Disposable income, net**	1 196
			D.63	Social transfers in kind	215
			D.631	Social transfers in kind — non-market production	211
			D.632	Social transfers in kind — purchased market production	4
B.7g	**Adjusted disposable income, gross**	1 434			
B.7n	**Adjusted disposable income, net**	1 411			

II.4: Use of income account
II.4.1: Use of disposable income account

Uses			Resources		
			B.6g	**Disposable income, gross**	1 219
P.3	Final consumption expenditure	1 015	B.6n	**Disposable income, net**	1 196
P.31	Individual consumption expenditure	1 015			
			D.8	Adjustment for the change in pension entitlements	11
B.8g	**Saving, gross**	215			
B.8n	**Saving, net**	192			

II.4.2: Use of adjusted disposable income account

Uses			Resources		
			B.7g	**Adjusted disposable income, gross**	1 434
P.4	Actual final consumption	1 230	B.7n	**Adjusted disposable income, net**	1 411
P.41	Actual individual consumption	1 230			
			D.8	Adjustment for the change in pension entitlements	11
B.8g	**Saving, gross**	215			
B.8n	**Saving, net**	192			

III: Accumulation accounts
III.1: Capital account
III.1.1: Change in net worth due to saving and capital transfers account

Changes in assets			Changes in liabilities and net worth		
B.101	**Changes in net worth due to saving and capital transfers**	210	B.8n	**Saving, net**	192
			D.9r	Capital transfers, receivable	23
			D.92r	Investment grants, receivable	0
			D.99r	Other capital transfers, receivable	23
			D.9p	Capital transfers, payable	–5
			D.91p	Capital taxes, payable	–2
			D.92p	Investment grants, payable	
			D.99p	Other capital transfers, payable	–3

III.1.2: Acquisition of non-financial assets account

Changes in assets			Changes in liabilities and net worth		
P.5g	Gross capital formation	55	B.101	**Changes in net worth due to saving and capital transfers**	210
P.5n	Net capital formation	32			
P.51g	Gross fixed capital formation	48			
P.511	Acquisitions less disposals of fixed assets	48			
P.5111	Acquisitions of new fixed assets	45			
P.5112	Acquisitions of existing fixed assets	3			
P.5113	Disposal of existing fixed assets	0			
P.512	Costs of ownership transfer on non-produced assets	0			
P.51c	Consumption of fixed capital	–23			
P.52	Changes in inventories	2			
P.53	Acquisitions less disposals of valuables	5			

Changes in assets			Changes in liabilities and net worth		
NP	Acquisitions less disposals of non-produced assets	4			
NP.1	Acquisitions less disposals of natural resources	3			
NP.2	Acquisitions less disposals of contracts, leases and licences	1			
NP.3	Purchases less sales of goodwill and marketing assets				
B.9	**Net lending (+)/net borrowing (–)**	174			

III.2: Financial account

Changes in assets			Changes in liabilities and net worth		
			B.9	**Net lending (+)/net borrowing (–)**	174
F	Net acquisition of financial assets	189	F	Net incurrence of liabilities	15
F.2	Currency and deposits	64	F.3	Debt securities	0
F.21	Currency	10	F.31	Short-term	0
F.22	Transferable deposits	27	F.32	Long-term	0
F.229	Other transferable deposits	27			
F.29	Other deposits	27	F.4	Loans	11
			F.41	Short-term	2
F.3	Debt securities	10	F.42	Long-term	9
F.31	Short-term	3			
F.32	Long-term	7	F.7	Financial derivatives and employee stock options	0
			F.71	Financial derivatives	0
F.4	Loans	3	F.711	Options	0
F.41	Short-term	3	F.712	Forwards	0
F.42	Long-term	0	F.72	Employee stock options	0
F.5	Equity and investment fund shares	66	F.8	Other accounts receivable/payable	4
F.51	Equity	53	F.81	Trade credits and advances	4
F.511	Listed shares	48	F.89	Other accounts receivable/payable, excluding trade credits and advances	0
F.512	Unlisted shares	2			
F.519	Other equity	3			
F.52	Investment fund shares/units	13			
F.521	Money market fund shares/units	5			
F.522	Non-MMF investment fund shares/units	8			
F.6	Insurance, pension and standardised guarantee schemes	39			

Changes in assets			Changes in liabilities and net worth		
F.61	Non-life insurance technical reserves	4			
F.62	Life insurance and annuity entitlements	22			
F.63	Pension entitlements	11			
F.64	Claim of pension fund on pension managers				
F.65	Entitlements to non-pension benefits	2			
F.66	Provisions for calls under standardised guarantees	0			
F.7	Financial derivatives and employee stock options	3			
F.71	Financial derivatives	1			
F.711	Options	1			
F.712	Forwards	0			
F.72	Employee stock options	2			
F.8	Other accounts receivable/ payable	4			
F.81	Trade credits and advances	3			
F.89	Other accounts receivable/ payable, excluding trade credits and advances	1			

III.3: Other changes in assets accounts
III.3.1: Other changes in volume of assets account

Changes in assets			Changes in liabilities and net worth		
K.1	Economic appearance of assets	0	K.5	Other changes in volume n.e.c.	1
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AF	Financial assets/liabilities	1
AN.22	Contracts, leases and licences	0	K.6	Changes in classification	0
AN.23	Purchases less sales of goodwill and marketing assets	0	K.61	Changes in sector classification and structure	0
K.2	Economic disappearance of non-produced assets	0	AN.1	Produced non-financial assets	0
K.21	Depletion of natural resources	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AF	Financial assets/liabilities	0
K.22	Other economic disappearance of non-produced assets	0	K.62	Changes in classification of assets and liabilities	0
AN.21	Natural resources	0	AN.1	Produced non-financial assets	0
AN.22	Contracts, leases and licences	0	AN.2	Non-produced non-financial assets	0

Changes in assets			Changes in liabilities and net worth		
AN.23	Purchases less sales of goodwill and marketing assets	0	AF	Financial assets/liabilities	0
K.3	Catastrophic losses	0	Total other changes in volume		1
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.11	Fixed assets	0
AF	Financial assets/liabilities	0	AN.12	Inventories	0
K.4	Uncompensated seizures	0	AN.13	Valuables	0
AN.1	Produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.21	Natural resources	0
AF	Financial assets	0	AN.22	Contracts, leases and licences	0
K.5	Other changes in volume n.e.c.	0	AN.23	Purchases less sales of goodwill and marketing assets	0
AN.1	Produced non-financial assets	0	AF	Financial assets	1
AN.2	Non-produced non-financial assets	0	AF.1	Monetary gold and SDRs	
AF	Financial assets/liabilities	0	AF.2	Currency and deposits	
K.6	Changes in classification	0	AF.3	Debt securities	
K.61	Changes in sector classification and structure	0	AF.4	Loans	0
AN.1	Produced non-financial assets	0	AF.5	Equity and investment fund shares	
AN.2	Non-produced non-financial assets	0	AF.6	Insurance pension and standardised guarantee schemes	1
AF	Financial assets/liabilities	0	AF.7	Financial derivatives and employee stock options	0
K.62	Changes in classification of assets and liabilities	0	AF.8	Other accounts receivable/ payable	0
AN.1	Produced non-financial assets	0			
AN.2	Non-produced non-financial assets	0			
AF	Financial assets/liabilities	0			
Total other changes in volume		0			
AN.1	Produced non-financial assets	0			
AN.11	Fixed assets	0			
AN.12	Inventories	0			
AN.13	Valuables	0			
AN.2	Non-produced non-financial assets	0			
AN.21	Natural resources	0			
AN.22	Contracts, leases and licences	0			
AN.23	Purchases less sales of goodwill and marketing assets	0			

Changes in assets			Changes in liabilities and net worth		
AF	Financial assets	0			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits				
AF.3	Debt securities				
AF.4	Loans	0			
AF.5	Equity and investment fund shares	0			
AF.6	Insurance pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.102	**Changes in net worth due to other changes in volume of assets**	–1

III.3.2: Revaluation account

Changes in assets			Changes in liabilities and net worth		
K.7	Nominal holding gains (+)/ losses(–)		K.7	Nominal holding gains(–)/ losses(+)	
AN	Non-financial assets	80	AF	Liabilities	0
AN.1	Produced non-financial assets	35	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	28	AF.2	Currency and deposits	0
AN.12	Inventories	2	AF.3	Debt securities	0
AN.13	Valuables	5	AF.4	Loans	0
AN.2	Non-produced non-financial assets	45	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	45	AF.6	Insurance, pension and standardised guarantee schemes	0
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	16			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits				
AF.3	Debt securities	6			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	10			
AF.6	Insurance, pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			

Changes in assets			Changes in liabilities and net worth		
AF.8	Other accounts receivable/ payable	0			
			B.103	**Changes in net worth due to nominal holding gains/losses**	96

III.3.2.1: Neutral holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.71	Neutral holding gains (+)/losses (–)		K.71	Neutral holding gains (–)/losses (+)	
AN	Non-financial assets	56	AF	Liabilities	5
AN.1	Produced non-financial assets	34	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	28	AF.2	Currency and deposits	0
AN.12	Inventories	2	AF.3	Debt securities	0
AN.13	Valuables	4	AF.4	Loans	3
AN.2	Non-produced non-financial assets	22	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	22	AF.6	Insurance, pension and standardised guarantee schemes	0
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	2
AF	Financial assets	36			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	17			
AF.3	Debt securities	4			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	9			
AF.6	Insurance, pension and standardised guarantee schemes	5			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	1			
			B.1031	**Changes in net worth due to neutral holding gains/losses**	87

III.3.2.2: Real holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.72	Real holding gains (+)/losses (–)		K.72	Real holding gains (–)/losses (+)	
AN	Non-financial assets	24	AF	Liabilities	–5
AN.1	Produced non-financial assets	1	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	0	AF.2	Currency and deposits	0

Changes in assets			Changes in liabilities and net worth		
AN.12	Inventories	0	AF.3	Debt securities	0
AN.13	Valuables	1	AF.4	Loans	–3
AN.2	Non-produced non-financial assets	23	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	23	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	–2
AF	Financial assets	–20			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	–17			
AF.3	Debt securities	2			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	1			
AF.6	Insurance, pension and standardised guarantee schemes	–5			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	–1			
			B.1032	**Changes in net worth due to real holding gains/losses**	9

IV: Balance sheets
IV.1: Opening balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	1 429	AF	Liabilities	189
AN.1	Produced non-financial assets	856	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	713	AF.2	Currency and deposits	10
AN.12	Inventories	48	AF.3	Debt securities	2
AN.13	Valuables	95	AF.4	Loans	169
AN.2	Non-produced non-financial assets	573	AF.5	Equity and investment fund shares	
AN.21	Natural resources	573	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	8
AF	Financial assets	3 260			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	840			

Assets			Liabilities and net worth		
AF.3	Debt securities	198			
AF.4	Loans	24			
AF.5	Equity and investment fund shares	1 749			
AF.6	Insurance, pension and standardised guarantee schemes	391			
AF.7	Financial derivatives and employee stock options	3			
AF.8	Other accounts receivable/ payable	55			
			B.90	**Net worth**	4 500

IV.2: Changes in balance sheet

Assets			Liabilities and net worth		
	Total changes in assets			Total changes in liabilities	
AN	Non-financial assets	115	AF	Liabilities	16
AN.1	Produced non-financial assets	67	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	53	AF.2	Currency and deposits	0
AN.12	Inventories	4	AF.3	Debt securities	0
AN.13	Valuables	10	AF.4	Loans	11
AN.2	Non-produced non-financial assets	48	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	48	AF.6	Insurance, pension and standardised guarantee schemes	1
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	4
AF	Financial assets	205			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	64			
AF.3	Debt securities	16			
AF.4	Loans	3			
AF.5	Equity and investment fund shares	76			
AF.6	Insurance, pension and standardised guarantee schemes	39			
AF.7	Financial derivatives and employee stock options	3			
AF.8	Other accounts receivable/ payable	4			
			B.10	**Changes in net worth**	304
			B.101	Changes in net worth due to saving and capital transfers	210

Assets			Liabilities and net worth		
			B.102	Changes in net worth due to other changes in volume of assets	–1
			B.103	Changes in net worth due to nominal holding gains and losses	96
			B.1031	Changes in net worth due to neutral holding gains and losses	87
			B.1032	Changes in net worth due to real holding gains and losses	9

IV: Balance sheets
IV.3: Closing balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	1 544	AF	Liabilities	205
AN.1	Produced non-financial assets	923	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	766	AF.2	Currency and deposits	10
AN.12	Inventories	52	AF.3	Debt securities	2
AN.13	Valuables	105	AF.4	Loans	180
AN.2	Non-produced non-financial assets	621	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	621	AF.6	Insurance, pension and standardised guarantee schemes	1
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	12
AF	Financial assets	3 465			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	904			
AF.3	Debt securities	214			
AF.4	Loans	27			
AF.5	Equity and investment fund shares	1 825			
AF.6	Insurance, pension and standardised guarantee schemes	430			
AF.7	Financial derivatives and employee stock options	6			
AF.8	Other accounts receivable/ payable	59			
			B.90	**Net worth**	4 804

Table 24.7 — Full sequence of accounts for non-profit institutions serving households

I: Production account

Uses			**Resources**		
P.2	Intermediate consumption	17	P.1	Output	32
			P.11	Market output	0
			P.12	Output for own final use	0
			P.13	Non-market output	32
B.1g	**Value added, gross**	15			
P.51c	Consumption of fixed capital	3			
B.1n	**Value added, net**	12			

II: Distribution and use of income accounts
II.1: Primary distribution of income account
II.1.1: Generation of income account

Uses			**Resources**		
D.1	Compensation of employees	11	B.1g	**Value added, gross**	15
D.11	Wages and salaries	6	B.1n	**Value added, net**	12
D.12	Employers' social contributions	5			
D.121	Employers' actual social contributions	4			
D.1211	Employers' actual pension contributions	4			
D.1212	Employers' actual non-pension contributions	0			
D.122	Employers' imputed social contributions	1			
D.1221	Employers' imputed pension contributions	1			
D.1222	Employers' imputed non-pension contributions	0			
D.29	Other taxes on production	1			
D.39	Other subsidies on production	0			
B.2g	**Operating surplus, gross**	3			
P.51c1	Consumption of fixed capital on gross operating surplus	3			
B.2n	**Operating surplus, net**	0			

II.1.2: Allocation of primary income account

Uses			**Resources**		
D.4	Property income	6	B.2g	**Operating surplus, gross**	3
D.41	Interest	6	B.3g	**Mixed income, gross**	
D.45	Rent	0	B.2n	**Operating surplus, net**	0
			B.3n	**Mixed income, net**	
			D.4	Property income	7

Uses			Resources		
			D.41	Interest	7
			D.42	Distributed income of corporations	0
			D.421	Dividends	0
			D.422	Withdrawals from income of quasi-corporations	
			D.43	Reinvested earnings on foreign direct investment	0
			D.44	Other investment income	0
			D.441	Investment income attributable to insurance policy holders	0
			D.442	Investment income payable on pension entitlements	
			D.443	Investment income attributable to collective investment fund shareholders	0
			D.4431	Dividends attributable to collective investment fund shareholders	0
			D.4432	Retained earnings attributable to collective investment fund shareholders	0
			D.45	Rent	0
B.5g	Balance of primary incomes, gross	4			
B.5n	Balance of primary incomes, net	1			

II.2: Secondary distribution of income account

Uses			Resources		
Current transfers		7	B.5g	Balance of primary incomes, gross	4
D.5	Current taxes on income, wealth, etc.	0	B.5n	Balance of primary incomes, net	1
D.51	Taxes on income	0			
D.59	Other current taxes	0	Current transfers		40
			D.61	Net social contributions	5
D.62	Social benefits other than social transfers in kind	5	D.611	Employers' actual social contributions	3
D.621	Social security benefits in cash		D.6111	Employers' actual pension contributions	2
D.6211	Social security pension benefits in cash		D.6112	Employers' actual non-pension contributions	1
D.6212	Social security non-pension benefits in cash		D.612	Employers' imputed social contributions	1
D.622	Other social insurance benefits	5	D.6121	Employers' imputed pension contributions	1

Uses			Resources		
D.6221	Other social insurance pension benefits	3	D.6122	Employers' imputed non-pension contributions	0
D.6222	Other social insurance non-pension benefits	2	D.613	Households' actual social contributions	1
D.623	Social assistance benefits in cash		D.6131	Households' actual pension contributions	0
			D.6132	Households' actual non-pension contributions	1
D.7	Other current transfers	2			
D.71	Net non-life insurance premiums	0	D.7	Other current transfers	36
D.711	Net non-life direct insurance premiums	0	D.72	Non-life insurance claims	0
D.712	Net non-life reinsurance premiums		D.721	Non-life direct insurance claims	0
D.72	Non-life insurance claims		D.722	Non-life reinsurance claims	
D.721	Non-life direct insurance claims		D.73	Current transfers within general government	
D.722	Non-life reinsurance claims		D.74	Current international cooperation	
D.73	Current transfers within general government		D.75	Miscellaneous current transfers	36
D.74	Current international cooperation		D.751	Current transfers to NPISHs	36
D.75	Miscellaneous current transfers	2	D.752	Current transfers between households	
D.751	Current transfers to NPISHs	0	D.759	Other miscellaneous current transfers	0
D.752	Current transfers between households				
D.759	Other miscellaneous current transfers	2			
B.6g	**Disposable income, gross**	37			
B.6n	**Disposable income, net**	34			

II.3: Redistribution of income in kind account

Uses			Resources		
D.63	Social transfers in kind	31	B.6g	**Disposable income, gross**	37
D.631	Social transfers in kind — non-market production	31	B.6n	**Disposable income, net**	34
D.632	Social transfers in kind — purchased market production	0			
B.7g	**Adjusted disposable income, gross**	6			
B.7n	**Adjusted disposable income, net**	3			

II.4: Use of income account
II.4.1: Use of disposable income account

Uses			Resources		
			B.6g	**Disposable income, gross**	37
P.3	Final consumption expenditure	32	B.6n	**Disposable income, net**	34
P.31	Individual consumption expenditure	31			
P.32	Collective consumption expenditure	1			
D.8	Adjustment for the change in pension entitlements	0			
B.8g	**Saving, gross**	5			
B.8n	**Saving, net**	2			

II.4.2: Use of adjusted disposable income account

Uses			Resources		
			B.7g	**Adjusted disposable income, gross**	6
P.4	Actual final consumption	1	B.7n	**Adjusted disposable income, net**	3
P.41	Actual individual consumption				
P.42	Actual collective consumption	1			
D.8	Adjustment for the change in pension entitlements	0			
B.8g	**Saving, gross**	5			
B.8n	**Saving, net**	2			

III: Accumulation accounts
III.1: Capital account
III.1.1: Change in net worth due to saving and capital transfers account

Changes in assets			Changes in liabilities and net worth		
B.101	**Changes in net worth due to saving and capital transfers**	–1	B.8n	**Saving, net**	2
			D.9r	Capital transfers, receivable	0
			D.92r	Investment grants, receivable	0
			D.99r	Other capital transfers, receivable	0
			D.9p	Capital transfers, payable	–3
			D.91p	Capital taxes, payable	0
			D.92p	Investment grants, payable	
			D.99p	Other capital transfers, payable	–3

III.1.2: Acquisition of non-financial assets account

Changes in assets			Changes in liabilities and net worth		
P.5g	Gross capital formation	5	B.101	**Changes in net worth due to saving and capital transfers**	–1
P.5n	Net capital formation	2			

Changes in assets			Changes in liabilities and net worth		
P.51g	Gross fixed capital formation	5			
P.511	Acquisitions less disposals of fixed assets	5			
P.5111	Acquisitions of new fixed assets	5			
P.5112	Acquisitions of existing fixed assets	1			
P.5113	Disposal of existing fixed assets	–1			
P.512	Costs of ownership transfer on non-produced assets	0			
P.51c	Consumption of fixed capital	–3			
P.52	Changes in inventories	0			
P.53	Acquisitions less disposals of valuables	0			
NP	Acquisitions less disposals of non-produced assets	1			
NP.1	Acquisitions less disposals of natural resources	1			
NP.2	Acquisitions less disposals of contracts, leases and licences	0			
NP.3	Purchases less sales of goodwill and marketing assets				
B.9	Net lending (+)/net borrowing (–)	–4			

III.2: Financial account

Changes in assets			Changes in liabilities and net worth		
			B.9	Net lending (+)/net borrowing (–)	–4
F	Net acquisition of financial assets	2	F	Net incurrence of liabilities	6
F.2	Currency and deposits	2	F.3	Debt securities	0
F.21	Currency	1	F.31	Short-term	0
F.22	Transferable deposits	1	F.32	Long-term	0
F.229	Other transferable deposits	1			
F.29	Other deposits	0	F.4	Loans	6
			F.41	Short-term	2
F.3	Debt securities	–1	F.42	Long-term	4
F.31	Short-term	0			
F.32	Long-term	–1	F.7	Financial derivatives and employee stock options	0
			F.71	Financial derivatives	0
F.4	Loans	0	F.711	Options	0
F.41	Short-term	0	F.712	Forwards	0
F.42	Long-term	0	F.72	Employee stock options	0

Changes in assets			Changes in liabilities and net worth		
F.5	Equity and investment fund shares	0	F.8	Other accounts receivable/ payable	0
F.51	Equity	0	F.81	Trade credits and advances	0
F.511	Listed shares	0	F.89	Other accounts receivable/ payable, excluding trade credits and advances	0
F.512	Unlisted shares	0			
F.519	Other equity	0			
F.52	Investment fund shares/units	0			
F.521	Money market fund shares/units	0			
F.522	Non-MMF investment fund shares/units	0			
F.6	Insurance, pension and standardised guarantee schemes	0			
F.61	Non-life insurance technical reserves	0			
F.62	Life insurance and annuity entitlements	0			
F.63	Pension entitlements				
F.64	Claim of pension fund on pension managers				
F.65	Entitlements to non-pension benefits				
F.66	Provisions for calls under standardised guarantees	0			
F.7	Financial derivatives and employee stock options	0			
F.71	Financial derivatives	0			
F.711	Options	0			
F.712	Forwards	0			
F.72	Employee stock options	0			
F.8	Other accounts receivable/ payable	1			
F.81	Trade credits and advances				
F.89	Other accounts receivable/ payable, excluding trade credits and advances	1			

III.3: Other changes in assets accounts
III.3.1: Other changes in volume of assets account

Changes in assets			Changes in liabilities and net worth		
K.1	Economic appearance of assets	0	K.5	Other changes in volume n.e.c.	0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AF	Financial assets/liabilities	0

Changes in assets			Changes in liabilities and net worth		
AN.22	Contracts, leases and licences	0	K.6	Changes in classification	0
AN.23	Purchases less sales of goodwill and marketing assets	0	K.61	Changes in sector classification and structure	0
K.2	Economic disappearance of non-produced assets	0	AN.1	Produced non-financial assets	0
K.21	Depletion of natural resources	0	AN.2	Non-produced non-financial assets	0
AN.21	Natural resources	0	AF	Financial assets/liabilities	0
K.22	Other economic disappearance of non-produced assets	0	K.62	Changes in classification of assets and liabilities	0
AN.21	Natural resources	0	AN.1	Produced non-financial assets	0
AN.22	Contracts, leases and licences	0	AN.2	Non-produced non-financial assets	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF	Financial assets/liabilities	0
K.3	Catastrophic losses	0	Total other changes in volume		0
AN.1	Produced non-financial assets	0	AN.1	Produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.11	Fixed assets	0
AF	Financial assets/liabilities	0	AN.12	Inventories	0
K.4	Uncompensated seizures	0	AN.13	Valuables	0
AN.1	Produced non-financial assets	0	AN.2	Non-produced non-financial assets	0
AN.2	Non-produced non-financial assets	0	AN.21	Natural resources	0
AF	Financial assets	0	AN.22	Contracts, leases and licences	0
K.5	Other changes in volume n.e.c.	0	AN.23	Purchases less sales of goodwill and marketing assets	0
AN.1	Produced non-financial assets	0	AF	Financial assets	0
AN.2	Non-produced non-financial assets	0	AF.1	Monetary gold and SDRs	
AF	Financial assets/liabilities	0	AF.2	Currency and deposits	
K.6	Changes in classification	0	AF.3	Debt securities	
K.61	Changes in sector classification and structure	0	AF.4	Loans	0
AN.1	Produced non-financial assets	0	AF.5	Equity and investment fund shares	
AN.2	Non-produced non-financial assets	0	AF.6	Insurance pension and standardised guarantee schemes	0
AF	Financial assets/liabilities	0	AF.7	Financial derivatives and employee stock options	0
K.62	Changes in classification of assets and liabilities	0	AF.8	Other accounts receivable/ payable	0
AN.1	Produced non-financial assets	0			
AN.2	Non-produced non-financial assets	0			

Changes in assets			Changes in liabilities and net worth		
AF	Financial assets/liabilities	0			
Total other changes in volume		0			
AN.1	Produced non-financial assets	0			
AN.11	Fixed assets	0			
AN.12	Inventories	0			
AN.13	Valuables	0			
AN.2	Non-produced non-financial assets	0			
AN.21	Natural resources	0			
AN.22	Contracts, leases and licences	0			
AN.23	Purchases less sales of goodwill and marketing assets	0			
AF	Financial assets	0			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits				
AF.3	Debt securities				
AF.4	Loans	0			
AF.5	Equity and investment fund shares	0			
AF.6	Insurance pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.102	Changes in net worth due to other changes in volume of assets	–1

III.3.2: Revaluation account

Changes in assets			Changes in liabilities and net worth		
K.7	Nominal holding gains (+)/ losses(–)		K.7	Nominal holding gains(–)/ losses(+)	
AN	Non-financial assets	8	AF	Liabilities	0
AN.1	Produced non-financial assets	5	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	5	AF.2	Currency and deposits	0
AN.12	Inventories	0	AF.3	Debt securities	0
AN.13	Valuables	0	AF.4	Loans	0
AN.2	Non-produced non-financial assets	3	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	3	AF.6	Insurance, pension and standardised guarantee schemes	0
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0

Changes in assets			Changes in liabilities and net worth		
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	2			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits				
AF.3	Debt securities	1			
AF.4	Loans				
AF.5	Equity and investment fund shares	1			
AF.6	Insurance, pension and standardised guarantee schemes				
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.103	Changes in net worth due to nominal holding gains/losses	10

III.3.2.1: Neutral holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.71	Neutral holding gains (+)/losses (–)		K.71	Neutral holding gains (–)/losses (+)	
AN	Non-financial assets	6	AF	Liabilities	3
AN.1	Produced non-financial assets	5	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	5	AF.2	Currency and deposits	1
AN.12	Inventories	0	AF.3	Debt securities	0
AN.13	Valuables	0	AF.4	Loans	1
AN.2	Non-produced non-financial assets	1	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	1	AF.6	Insurance, pension and standardised guarantee schemes	0
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	1
AF	Financial assets	3			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	2			
AF.3	Debt securities	1			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	0			
AF.6	Insurance, pension and standardised guarantee schemes	0			

Changes in assets			Changes in liabilities and net worth		
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.1031	Changes in net worth due to neutral holding gains/losses	6

III.3.2.2: Real holding gains/losses account

Changes in assets			Changes in liabilities and net worth		
K.72	Real holding gains (+)/losses (–)		K.72	Real holding gains (–)/losses (+)	
AN	Non-financial assets	2	AF	Liabilities	–3
AN.1	Produced non-financial assets	0	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	0	AF.2	Currency and deposits	–1
AN.12	Inventories	0	AF.3	Debt securities	0
AN.13	Valuables	0	AF.4	Loans	–1
AN.2	Non-produced non-financial assets	2	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	2	AF.6	Insurance, pension and standardised guarantee schemes	
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	–1
AF	Financial assets	–1			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	–2			
AF.3	Debt securities	0			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	1			
AF.6	Insurance, pension and standardised guarantee schemes	0			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	0			
			B.1032	Changes in net worth due to real holding gains/losses	4

IV: Balance sheets
IV.1: Opening balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	159	AF	Liabilities	121
AN.1	Produced non-financial assets	124	AF.1	Monetary gold and SDRs	

Assets			Liabilities and net worth		
AN.11	Fixed assets	121	AF.2	Currency and deposits	38
AN.12	Inventories	1	AF.3	Debt securities	0
AN.13	Valuables	2	AF.4	Loans	43
AN.2	Non-produced non-financial assets	35	AF.5	Equity and investment fund shares	
AN.21	Natural resources	35	AF.6	Insurance, pension and standardised guarantee schemes	5
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	35
AF	Financial assets	172			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	110			
AF.3	Debt securities	25			
AF.4	Loans	8			
AF.5	Equity and investment fund shares	22			
AF.6	Insurance, pension and standardised guarantee schemes	4			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	3			
			B.90	Net worth	210

IV.2: Changes in balance sheet

Assets			Liabilities and net worth		
	Total changes in assets			Total changes in liabilities	
AN	Non-financial assets	11	AF	Liabilities	6
AN.1	Produced non-financial assets	7	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	7	AF.2	Currency and deposits	0
AN.12	Inventories	0	AF.3	Debt securities	0
AN.13	Valuables	0	AF.4	Loans	6
AN.2	Non-produced non-financial assets	4	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	4	AF.6	Insurance, pension and standardised guarantee schemes	0
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	0
AF	Financial assets	4			
AF.1	Monetary gold and SDRs				

Assets			Liabilities and net worth		
AF.2	Currency and deposits	2			
AF.3	Debt securities	0			
AF.4	Loans	0			
AF.5	Equity and investment fund shares	1			
AF.6	Insurance, pension and standardised guarantee schemes	0			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	1			
			B.10	Changes in net worth	9
			B.101	Changes in net worth due to saving and capital transfers	–1
			B.102	Changes in net worth due to other changes in volume of assets	0
			B.103	Changes in net worth due to nominal holding gains and losses	10
			B.1031	Changes in net worth due to neutral holding gains and losses	6
			B.1032	Changes in net worth due to real holding gains and losses	4

IV: Balance sheets
IV.3: Closing balance sheet

Assets			Liabilities and net worth		
AN	Non-financial assets	170	AF	Liabilities	127
AN.1	Produced non-financial assets	131	AF.1	Monetary gold and SDRs	
AN.11	Fixed assets	128	AF.2	Currency and deposits	38
AN.12	Inventories	1	AF.3	Debt securities	0
AN.13	Valuables	2	AF.4	Loans	49
AN.2	Non-produced non-financial assets	39	AF.5	Equity and investment fund shares	0
AN.21	Natural resources	39	AF.6	Insurance, pension and standardised guarantee schemes	5
AN.22	Contracts, leases and licences	0	AF.7	Financial derivatives and employee stock options	0
AN.23	Purchases less sales of goodwill and marketing assets	0	AF.8	Other accounts receivable/ payable	35
AF	Financial assets	176			
AF.1	Monetary gold and SDRs				
AF.2	Currency and deposits	112			
AF.3	Debt securities	25			
AF.4	Loans	8			

Assets			Liabilities and net worth		
AF.5	Equity and investment fund shares	23			
AF.6	Insurance, pension and standardised guarantee schemes	4			
AF.7	Financial derivatives and employee stock options	0			
AF.8	Other accounts receivable/ payable	4			
			B.90	Net worth	219

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