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Chapter 2: Overview

A. Introduction

2.1 This chapter provides an overview of the accounting framework of the System and in doing so gives an overview of most of the following chapters also.

a. It introduces the conceptual elements that form the building blocks of the accounting system and the rules of accounting to be followed. They are further elaborated in section B and C and in their full detail in chapters 3, 4 and 5.

b. It describes the standard view of the central framework of main accounting structure. Each account is introduced with a description of the nature of the account and an insight into the sort of analysis the account can yield. The accounts are described in section D and then in chapters 6 to 17.

c. Thereafter, the chapter shows some of the ways in which the central framework may be applied flexibly, depending on specific country requirements. In particular satellite accounts are introduced. These extensions and applications of the System are described briefly in section E and in chapters 18 to 29.

2.2 As explained in chapter 1, the central framework describes the essential phenomena which constitute economic behaviour: production, consumption, accumulation and the associated concepts of income and wealth. The System aims to provide a representation of this set of phenomena and their interrelations that is simplified to aid comprehension but still covers all important considerations. To achieve this, the central framework must satisfy two conditions; it must be integrated and consistent.

2.3 To be integrated, the same concepts, definitions and classifications must be applied to all accounts and sub-accounts. For example, once it is decided dwellings are treated as assets, all dwellings must give rise to housing services that are included within the production boundary, regardless of whether the dwellings are occupied by the owners or are rented on the market. Equally, all give rise to income that must be treated in the same way in the System, regardless of the relationship between the owner and the occupier.

2.4 To be consistent, each economic flow or stock level appearing in the System must be measured identically for the parties involved. This consistency is achieved by applying throughout the System the same concepts and definitions and also by using a single set of accounting rules for all entries in the System. In practice, the actual data coming from the accounts or statistics provided by elementary units will not be fully consistent for various reasons, and so achieving the consistency required by the System requires a large amount of additional work.

1. Analysing flows and stocks

2.5 Basically, the purpose of a system of national accounts is to record economic flows and stocks. Economic flows can be thought of in various ways. Consider the question "*Who does what*?" "Who" refers to the economic agent engaged in doing something, the operator. "What" is connected with the kind of action this agent is undertaking. In a few cases, the answer to this simple question provides a good preliminary characterization of an economic flow. However, in general the question is too simple to provide even a rough economic description of a specific flow. Take the example of somebody buying a loaf of bread. In order to characterize the flow, it is necessary to consider from whom this loaf of bread is bought (a baker or a supermarket) and what is given in exchange (a coin or a note). So the starting question is transformed into "Who does what *with whom in exchange for what?*" This rather simple flow involves two operators (a buyer, a seller), two main actions (a purchase, a sale), two secondary actions (a payment, a receipt) and two objects (bread, a coin or a note). Again, a complete description would require more information: at least the weight, kind and price of the bread.

2.6 The picture in the real world is still more complicated. Before this flow occurred, the seller had a certain quantity of bread in his shop; afterwards he has less bread but more money. The buyer had a certain amount of money, now he has less money but some bread (before eating it). So the flow between them has changed their initial situations. This means that flows cannot be looked at in isolation; the situations before and after a flow occurs need to be considered. At those two points in time, one must ask the question "*Who has what*?" The baker not only has bread and currency, he also has a house with the shop, baking equipment, some flour, a deposit in a bank, a car, etc. In other words, he has (he owns) a certain stock of objects. The same is true for the buyer. In addition to what they are in themselves, flows modify stocks. Flows and changes in stocks are intrinsically connected. The previous question is again transformed into "Who does what with whom in exchange for what *with what changes in stocks*?"

2.7 However, the various ways of looking at this example have not yet been exhausted. Before the baker can sell bread, he has to bake it. He uses flour, water, electricity, baking equipment, etc. So, an additional question is "*Who does what by what*

means?" What he does can also be characterized in two ways: his activity (to bake) and the result of it (a product: bread). With respect to the buyer one can ask *"Why does he buy bread?"* The obvious purpose is to eat, as food; however, it could be to give to a beggar, as charity. This raises the question "Who does what *for what purpose*?"

2.8 Adding all the questions together results in a rather complex combination of simple links: "Who does what, with whom, in exchange for what, by what means, for what purpose, with what changes in stocks?" Answering these questions for all economic flows and stocks and operators in a given economy would provide an enormous amount of information describing the complete network of economic interrelations. However, it would require an enormous amount of basic data, which are not always available nor complete in that they may cover only certain aspects of the complex chain of questions. Further, it is necessary to organize the recording of economic flows and stocks in a comprehensible way, as discussed in the next section.

2. Recording flows and stocks

2.9 Users' needs set certain requirements for the accounting framework. The first requirement is that it should provide a picture of the economy, but the picture must be simplified in order to be both comprehensible and manageable. The second requirement is that it should faithfully represent economic behaviour by covering all important aspects in a balanced way without neglecting or giving too little emphasis to some aspects or giving others too much prominence. Finally, it should portray all significant economic interrelations and the results of economic activity. Although meeting these requirements is necessary, they are somewhat contradictory. Achieving the right balance between them is not easy. Too great a simplification can lose sight of or neglect important aspects of economic behaviour; too detailed a portrayal of reality can overburden the picture and reduce insight; too much sophistication can lower comprehension and mislead some users; and so on.

2.10 To meet these requirements, the System uses a limited number of basic categories to analyse and aggregate certain aspects (Who? What? What purpose? What stocks?) of the very numerous elementary flows. However, the System simplifies the picture it gives of the economic interrelations by not recording the "from-whom-to-whom?" question in a fully systematic way; that is, it does not always depict the network of flows between the various types of operators. Consider three units, A, B and C, each of which makes payments of the same type to the other two; they might be three shop-keepers, for example, who sell different types of goods. Suppose A buys 2 from B and 3 from C; B buys 6 from A and 1 from C; C buys 4 from each of A and B. A full articulation of the flows could be captured in a three-by-three table as follows:

	A	B	C	Total purchases
A		2	3	5
B	6		1	7
C	4	4		8
Total sales	10	6	4	20

2.11 Although only the purchases were specified, it follows that the receipts of each unit are also available in the table. The totals in the right-most column show the total purchases of each of the three units and the bottom-most row shows the total receipts by each of the three units. The sum of each must, obviously, be the same since each is the sum of all entries within the table. Within the central framework, the full detail of the flows from each of A, B and C to each of the others is not generally shown; it is sufficient to show only the totals in the right-most column and the bottom-most row and know that these must balance.

2.12 In some presentations, particularly those using a matrix format of presentation, some of these extra details may be shown. Discussion of this appears in chapters 14, 28 and 29. Even in the central framework, the full detail may be available. For example if in some case A, B and C do not interact with one another but only with another unit G, as is the case in the payment of taxes, then there are only four entries to be shown; the payments by each of A, B and C and the receipts by G.

2.13 Another case where the System introduces a simplification is in terms of the "what in exchange for what?" question; that is, it does not indicate, for example, the specific nature of the financial counterpart (currency or deposit or short-term loan, etc.) for the purchases of goods and services or the payment of taxes.

2.14 The fact that the System is integrated, although articulated in only two and not three dimensions, does not reduce its consistency requirements. In effect, the purpose of the System is to derive national accounts that are as consistent as they would be if they were fully articulated; each economic flow or stock should be measured identically for both parties involved. The consistency in the System is achieved by applying the same concepts and definitions throughout and also by using a single strict set of accounting rules.

B. The conceptual elements of the System

2.15 The System contains a number of conceptual elements that determine the accounting framework of the System and permit various aspects of the questions raised above to be answered. These concepts are:

a. Institutional units and sectors (*who*?);

b. Transactions and other flows (*what*?);

c. Assets and liabilities (*what stocks*?);

d. Products and producing units (other aspects of *who* and *what*?);

e. Purposes (*why*?).

They are presented in turn.

1. Institutional units and sectors

2.16 The fundamental units identified in the System are the economic units that can engage in the full range of transactions and are capable of owning assets and incurring liabilities on their own behalf. These units are called institutional units. Further, because they have legal responsibility for their actions, institutional units are centres of decision-making for all aspects of economic behaviour. In practice, some institutional units are controlled by others and thus in such cases autonomy of decision is not total and may vary over time. Legally independent holding of assets and liabilities and autonomous behaviour do not always coincide. In the System, preference is generally given to the first aspect because it provides a better way to organize the collection and presentation of statistics even if its usefulness is limited in some cases.

Institutional sectors

2.17 The institutional units are grouped together to form institutional sectors, on the basis of their principal functions, behaviour and objectives:

a. *Non-financial corporations*: institutional units that are principally engaged in the production of market goods and non-financial services;

b. *Financial corporations*: institutional units that are principally engaged in financial services including intermediation;

c. *General government*: institutional units that, in addition to fulfilling their political responsibilities and their role of economic regulation, produce services (possibly goods) for individual or collective consumption mainly on a non-market basis and redistribute income and wealth;

d. *Households*: institutional units consisting of one individual or a group of individuals. All physical persons in the economy must belong to one and only one household. The principal functions of households are to supply labour, to undertake final consumption and, as entrepreneurs, to produce market goods and non-financial (possibly financial) services. The entrepreneurial activities of a household consist of unincorporated enterprises that remain within the household except under certain specific conditions.

e. *Non-profit institutions serving households (NPISHs)*: legal entities that are principally engaged in the production of non-market services for households or the community at large and whose main resources are voluntary contributions.

2.18 Each sector, contains a number of sub-sectors distinguished according to a hierarchical classification (described in chapter 4). A sub-sector comprises entire institutional units, and each institutional unit belongs to only one sub-sector though alternative groupings are possible. The distinction between public, national private and foreign controlled corporations and between various socio-economic groups of households is included in the System in order to respond to policy concerns.

Delimitation of the total economy and the rest of the world

2.19 The total economy is defined in terms of institutional units. It consists of all the institutional units which are resident in the economic territory of a country. The economic territory of a country, although consisting essentially of the geographical territory, does not coincide exactly; some additions and subtractions are made (see chapter 26). The concept of residence in the System is not based on nationality or legal criteria. An institutional unit is said to be a resident unit of a country when it has a centre of economic interest in the economic territory of that country; that is, when it engages for an extended period (one year or more being taken as a practical guideline) in economic activities on this territory. The institutional sectors referred to above include only resident units.

2.20 Resident units engage in transactions with non-resident units (that is, units that are residents of other economies). These transactions are the external transactions of the economy and are grouped in the account of the rest of the world. Strictly speaking, the rest of the world is the account of transactions occurring between resident and non-resident units, but it may also be seen as the whole group of non-resident units that enter into transactions with resident units. In the System's accounting structure, 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.

2. Transactions and other flows

2.21 Institutional units fulfil various economic functions; that is, they produce, consume, save, invest, etc. They may engage in various types of production (agriculture, manufacturing, etc.) as entrepreneurs, providers of labour or suppliers of capital. In all aspects of their economic functions and activities, they undertake a great number of elementary economic actions. These actions result in economic flows, which, however they are characterised (wages, taxes, fixed capital formation, etc.), create, transform, exchange, transfer or extinguish economic value; they involve changes in the volume, composition or value of an institutional unit's assets or liabilities. The economic value may take the form of ownership rights on physical objects (a loaf of bread, a dwelling) or intangible assets (a film original) or of financial claims (liabilities being understood as negative economic value). In all cases, economic value is potentially usable to acquire goods or services, pay wages or taxes, etc.

2.22 Most economic actions are undertaken by mutual agreement between institutional units. They are either an exchange of economic value or a voluntary transfer by one unit to another

of a certain amount of economic value without a counterpart. These actions undertaken by mutual agreement between two institutional units are called transactions in the System. The System also treats certain economic actions involving only a single institutional unit as transactions. They are described as internal, or intra-unit, transactions. For example, own-account fixed capital formation is treated as a transaction between a unit in its capacity as a producer with itself in its capacity as an acquirer of fixed capital. Such transactions are similar in nature to actions undertaken by mutual agreement by two different institutional units.

2.23 However, not all economic flows are transactions. For example, certain actions undertaken unilaterally by one institutional unit have consequences on other institutional units without the latter's consent. The System records such actions only to a limited extent, essentially when governments or other institutional units take possession of the assets of other institutional units, including non-resident units, without full compensation. In fact, unilateral economic actions bearing consequences, either positive or negative, on other economic units (externalities) are much broader but such externalities are not recorded in the System. Human action may result in the transfer of natural assets to economic activities and the subsequent transformation of these assets. These phenomena are recorded in the System as economic flows, bringing in economic value. Non-economic phenomena, such as wars and natural disasters, may destroy economic assets, and this extinction of economic value must be accounted for. The value of economic assets and liabilities may change during the time they are held as stocks, as a consequence of changes in prices. These and similar flows that are not transactions, which are called other economic flows in the System, are described in chapter 12.

2.24 Economic flows can be actual, observable flows or they can be built up or estimated for analytical purposes. Certain flows may be directly observed in value terms. This is the case for monetary transactions between two institutional units, such as a purchase or sale of a good or the payment of a tax. Other two-unit flows are observable but cannot be immediately valued. These flows include barter of goods and services or education services consumed by students and provided free of charge by government; a value in money terms has to be attributed to them. Barter is an example of a two-unit flow involving a "quid pro quo" that is, a flow in one direction is linked to a counterpart flow in the opposite direction; a social assistance benefit in cash is a two-unit flow that does not involve a quid pro quo. Another kind of flow involves only one institutional unit. Such flows may be physically observable, as in the case of output for own-account consumption or capital formation, or destruction by natural catastrophes. A value has to be attributed to them (this may be fairly easy in certain cases, such as when output is mostly sold). Other intra-unit, or internal, flows may not be observable as such; accounting entries are then constructed in order to measure economic performance correctly. This is the case for the consumption of fixed capital or the revaluation of assets and liabilities. Certain inter-units flows, like reinvested earnings on foreign direct investment, are also accounting entries created for analytical purposes. Finally, some observable monetary transactions are not recorded as they are observed in practice because they are of a composite nature (nominal interest, total insurance premiums) or their legal nature does not correspond to their economic one (financial leasing). Consequently, for the System, they are split up into various components and their classification and routing are modified.

2.25 Although monetary transactions have a basic role in the valuation of flows in the System, non-monetary transactions are also significant. They include flows of goods and services that take place between institutional units for which values have to be estimated and also some flows that are assumed to take place within units. The relative importance of non-monetary transactions varies according to the type of economy and the objectives pursued by the accounting system. Although the volume of non-monetary flows is generally greater for less developed economies than for developed ones, even for the latter it is not negligible.

Main types of transactions and other flows

2.26 Elementary transactions and other flows are innumerable. They are grouped into a relatively small number of types according to their nature. The System's main classification of transactions and other flows includes four first-level types, with each subdivided according to a hierarchical classification. It is designed to be used systematically in the accounts and tables of the central framework and cross-classified with institutional sectors, industry and product, and purpose classifications. A full set of transactions and their codes appear in annex 1.

2.27 *Transactions in goods and services (products)* describe the origin (domestic output or imports) and use (intermediate consumption, final consumption, capital formation or exports) of goods and services. By definition, goods and services in the System are always a result of production, either domestically or abroad, in the current period or in a previous one. The term products is thus a synonym for goods and services.

2.28 *Distributive transactions* consist of transactions by which the value added generated by production is distributed to labour, capital and government and transactions involving the redistribution of income and wealth (taxes on income and wealth and other transfers). The System draws a distinction between current and capital transfers, with the latter deemed to redistribute saving or wealth rather than income. (This is discussed in detail in chapter 8.)

2.29 *Transactions in financial instruments* (or financial transactions) refer to the net acquisition of financial assets or the net incurrence of liabilities for each type of financial instrument. Such changes often occur as counterparts of non-financial transactions. They also occur as transactions involving only financial instruments. Transactions in contingent assets and liabilities are not considered transactions in the System (see chapter 11).

2.30 *Other accumulation entries* cover transactions and other economic flows not previously taken into account that change the quantity or value of assets and liabilities. They include: acquisitions less disposals of non-produced non-financial assets; other economic flows of non-produced assets, such as discovery or depletion of subsoil resources or transfers of other natural resources to economic activities; the effects of non-

economic phenomena such as natural catastrophes and political events (wars for example) and finally, they include holding gains or losses, due to changes in prices, and some minor items (see chapter 12).

Characteristics of transactions in the System

2.31 In order to provide more useful answers to the questions raised in the analysis of flows, some transactions are not recorded in the System as they might be directly observed. The System often uses categories which are more closely identified with an economic concept. For example, gross fixed capital formation, a sub-category of transactions in goods and services, is broader than the limited coverage thought of as "purchases of fixed assets". In order to be closer to an economic concept, it covers the acquisition of new and existing fixed assets, through purchases, barter transactions or own-account capital formation, less the disposal of existing assets, through sales or barter transactions.

2.32 As the previous example shows, the System also often uses categories which are compacted, that is, are the result of combining a number of elementary transactions. "Changes in inventories", for example, is the difference between entries into and withdrawals from inventories and recurrent losses. The same netting happens for transactions in financial instruments. All transactions in an instrument held as an asset (or as a liability) are grouped under the heading of this instrument. The item "loans," for example, covers issuance of new loans, conversions, and redemptions or cancellations of existing loans. Finally, some categories of transactions in the System, such as distributive transactions concerning interest and net non-life insurance premiums, require an actual transaction to be split into parts.

3. Assets and liabilities

2.33 Assets and liabilities are the components of the balance sheets of the total economy and institutional sectors. In contrast to the accounts that show economic flows, a balance sheet shows the stocks of assets and liabilities held at one point in time by each unit or sector or the economy as a whole. Balance sheets are normally constructed at the start and end of an accounting period but they can in principle be constructed at any point in time. However, stocks result from the accumulation of prior transactions and other flows, and they are modified by future transactions and other flows. Thus stocks and flows are closely related.

2.34 The coverage of assets is limited to those assets which are subject to ownership rights and from which economic benefits may be derived by their owners by holding them or using them in an economic activity as defined in the System. Most consumer durables, human capital and natural resources that are not capable of bringing economic benefits to their owners are outside the scope of assets in the System.

2.35 The classification of assets distinguishes, at the first level, financial and non-financial (produced and non-produced) assets (see chapter 10). Most non-financial assets generally serve two purposes. They are primarily objects usable in economic activity and, at the same time, serve as stores of value. Financial assets are necessarily and primarily stores of value, although they may also fulfil other functions.

4. Products and producing units

Products

2.36 Goods and services, also called products, are the result of production. They are exchanged and used for various purposes; as inputs in the production of other goods and services, as final consumption or for investment. Here again the System makes a conceptual distinction between market, own final use and non-market goods and services, allowing in principle any kind of good or service to be any of these three types.

Producing units

2.37 Institutional units such as corporations may produce various types of goods and services. These goods and services result from processes of production which may differ as regards materials and supplies consumed, kind of equipment and labour employed and techniques used. In other words, they may come from different production activities. In order to study transactions in goods and services in detail, the System uses the Central Product Classification (CPC).

2.38 To study production and production functions in detail, it is necessary to refer to more homogeneous units. The ideal solution would be to be able to identify and observe units that engaged in only one production activity. As it is also necessary to give a picture of the distribution of production in space, this unit should also be in a single location or nearby sites. In practice, it is not always feasible to distinguish units of production engaged in a single activity, and for which the necessary data are available, inside multi-activity units,. Inevitably, therefore, some secondary activities that cannot be separated are covered. For that reason, for the detailed study of production, the System uses a unit which, in addition to its principal activity, may cover secondary activities. This unit is the establishment.

2.39 Establishments that have the same principal activity are grouped into industries according to the International Standard Industrial Classification of All Economic Activities (ISIC, Revision 4).

2.40 Given the fundamental role played by the market in modern economies, the System distinguishes, as an essential feature of its structure, between establishments that are market producers, producers for own final use and non-market producers. Market establishments produce goods and services mostly for sale at prices that are economically significant. Producers for own final use produce goods and services mostly for final consumption or fixed capital formation by the owners of the enterprises in which they are produced. Non-market establishments supply most of the goods and services they produce without charge or at prices that are not economically significant.

2.41 There is a hierarchical relationship between institutional units and establishments. An institutional unit contains one or more

entire establishment(s); an establishment belongs to one and only one institutional unit.

5. Purposes

2.42 The concept of purpose, or function, relates to the type of need a transaction or group of transactions aims to satisfy or the kind of objective it pursues. Transactions are first analysed in the System according to their nature. Then, for certain sectors or kind of transactions, they are analysed from the expenditure side, by purpose, answering the earlier question "for what purpose?" Classification by purpose is described in the context of the supply and use tables in chapter 14.

C. Rules of accounting

1. Introduction

Terminology for the two sides of the accounts

2.43 The System utilizes the term *resources* for transactions which add to the amount of economic value of a unit or a sector appear. For example, wages and salaries are a resource for the unit or sector receiving them. Resources are by convention put on the right-hand side of the current accounts. The left-hand side of the accounts, which includes transactions that reduce the amount of economic value of a unit or sector, is termed *uses*. To continue the example, wages and salaries are a use for the unit or sector that must pay them.

2.44 Balance sheets are presented with *liabilities and net worth* (the difference between assets and liabilities) on the right-hand side and *assets* on the left-hand side. Comparing two successive balance sheets, gives changes in liabilities and net worth and changes in assets.

2.45 The accumulation accounts and balance sheets being fully integrated, the right-hand side of the accumulation accounts is called *changes in liabilities and net worth* and their left-hand side is called *changes in assets*. In the case of transactions in financial instruments, the changes in liabilities are often referred to as (net) incurrence of liabilities and the changes in assets as (net) acquisition of financial assets.

Change of ownership and the recording of transactions in goods and services

2.46 A good may be held and be processed by a unit that does not have title to the ownership of the good. One example is a good given to a unit for repair. The activity of the repairer is only the cost incurred to effect the repair and the cost of the good being repaired does not feature in the accounts of the repairer. This is obvious and uncontroversial for every day types of repairs such as repairing shoes or a vehicle. However, the same principle also applies when one unit processes goods on behalf of another unit. For example, one unit may receive a set of components from another unit and return the assembled product.

2.47 Within the System, a distinction is made between legal ownership and economic ownership. The criterion for recording the transfer of products from one unit to another in the System is that the economic ownership of the product changes from the first unit to the second. The legal owner is the unit entitled in law to the benefits embodied in the value of the product. A legal owner may, though, contract with another unit for the latter to accept the risks and rewards of using the product in production in return for an agreed amount that has a smaller element of risk in it. Such an example is when a bank legally owns a plane but allows an airline to use it in return for an agreed sum. It is the airline that then must take all the decisions about how often to fly the plane, to where and at what cost to the passengers. The airline is then said to be the economic owner of the plane even though the bank remains the legal owner. In the accounts, it is the airline and not the bank that is shown as purchasing the plane. At the same time, a loan, equal in value to payments due to the bank for the duration of the agreement between them is imputed as being made by the bank to the airline.

2.48 The same principle applies to goods sent abroad for processing. If the processor is not concerned about how and where and for how much the item he is assembling is sold, the economic ownership remains with the legal owner. Even though the goods may physically pass from one country to another, they are not treated as imports and exports because the economic ownership has not changed.

2.49 Within a large enterprise with several specialised establishments, it is not immediately obvious whether a delivery of goods from one establishment to another is to be recorded or not. Since all the establishments have the same ownership, the distinction between economic and legal ownership needs refining. The criterion used is to record a delivery when the receiving unit assumes the responsibility, in terms of economic risks and rewards, of the items delivered. If the receiving unit does not accept this responsibility, for example by returning the processed items to the original sending unit, then it is only performing a service on the items and they are not recorded as being delivered from the first unit to the second.

Double entry or quadruple entry

2.50 For a unit or sector, national accounting is based on the principle of double entry, as in business accounting. Each transaction must 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 of the consistency of the accounts. Economic flows that are not transactions have their counterpart

directly as changes in net worth, by construction. This is shown in section D below (and also in chapter 12, which describes the other changes in the volume of assets account and the revaluation account).

2.51 The implications of the double entry principle are easy to grasp in a number of cases: a household's purchase on credit of a consumer good will appear as a use under final consumption expenditure and as an incurrence of a liability under loans, for example. If this good is paid for in cash, however, the picture is less simple: the counterpart of a use under final consumption is now a negative acquisition of assets, under currency and deposits, for instance. Other transactions are even more complicated. Output of goods is recorded as a resource in the account of a producer, its counterpart among uses is recorded as a positive change in inventories. When the output is sold, there is a negative change in inventories, that is, a negative acquisition of assets, balanced by a positive acquisition of assets, for instance under currency and deposits. In many instances, as explained earlier, the difficulty of seeing how the double entry principle applies is due to the fact that the categories of transactions in the System are compacted.

2.52 In principle, the recording of the consequences of an action as it affects all units and all sectors is based on a principle of quadruple entry, because most transactions involve two institutional units. Each transaction of this type must be recorded twice by each of 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 the relevant type of transfers and a negative acquisition of assets under currency and deposits; in the accounts of the household sector, it is recorded as a resource under transfers and an acquisition of assets under currency and deposits. The principle of quadruple entry applies even when the detailed from-whom-to-whom relations between sectors are not shown in the accounts. Correctly recording the four transactions involved ensures full consistency in the accounts.

2.53 As noted in the introduction, the data available to the national accounts compiler may not in practice initially satisfy the consistency requirements of the System. The accounts of the nation are not kept in the same way as a business unit or government, that is, by actually recording all flows occurring in a given period. They rely on accounts of various units that are not always consistent, complete or even available. For household accounts in particular, other statistics such as those from household surveys have to be used. Reconciling disparate data sources within the consistency constraints imposed by the quadruple entry principle is fundamental to compiling a complete set of accounts.

2. Time of recording

2.54 One implication of the quadruple entry principle is that transactions, or other flows, when relevant, have to be recorded at the same point of time in the various accounts in question for both units involved. The same applies to stocks of financial assets and liabilities.

2.55 The general principle in national accounting is that transactions between institutional units have to be recorded when claims and obligations arise, are transformed or are cancelled. This time of recording is called an accrual basis. Transactions internal to one institutional unit are equivalently recorded when economic value is created, transformed or extinguished. Generally speaking, all transactions, however they are described, can always be viewed as dealing with economic value.

2.56 One has thus to distinguish carefully between a transaction and the corresponding cash movement which takes place, except for a transaction in kind, at a given point of time. Even when a transaction (a purchase or sale of a good, for example) and the payment or receipt are simultaneous, the two aspects exist. The purchaser incurs a liability, the seller acquires a claim as a counterpart of the delivery of the good. Then the liability and the claim are cancelled by the payment. In most cases there is a delay between the actual transaction and the corresponding payment or receipt. In principle, national accounts record actual transactions, not on a cash basis, but on an accrual basis. Conceptually they follow the same principle as business accounting.

2.57 Although the principle is clear, its implementation is far from simple. Institutional units do not always apply the same 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, sometimes even in a different accounting period. Discrepancies exist which national accounts must eliminate by after-the-fact adjustments. In addition, because the time at which a claim or liability arises is not always unambiguous, further implementation problems arise. The rules and conventions adopted in the System for particular transactions are specified in subsequent chapters, in particular in chapter 3.

3. Valuation

General principles

2.58 Also following from the quadruple entry principle, a transaction must be recorded at the same value through all the accounts of both sectors involved. The same principle applies to assets and liabilities. It means that a financial asset and its liability counterpart have to be recorded for the same amount in the creditor and the debtor accounts.

2.59 Transactions are valued at the actual price agreed upon by the transactors. Market prices are thus the basic reference for valuation in the System. In the absence of market transactions, valuation is made according to costs incurred (for example, non-market services produced by government) or by reference to market prices for analogous goods or services (for example, services of owner-occupied dwellings).

2.60 Assets and liabilities are recorded at current values at the time to which the balance sheet relates, not at their original valuation. Theoretically, national accounts are based on the assumption that the values of assets and liabilities are continuously up-rated to current values, even if in fact up-rating occurs only periodically. The appropriate valuation basis for assets and liabilities is the value at which they might be bought in markets at the time the valuation is required. Ideally, values observed in markets or estimated from observed market values should be used. When

this is not possible, current values may be approximated for balance sheet valuation in two other ways, by accumulating and revaluing transactions over time or by estimating the discounted present value of future returns expected from a given asset (see also chapter 13).

2.61 Internal transactions are valued at current values at the time these transactions occur, not at the original valuation. These internal transactions include entries in inventories, withdrawals from inventories, intermediate consumption and consumption of fixed capital.

Methods of valuation

2.62 Various methods of treating taxes on products, subsidies, and trade and transport margins in valuing transactions on products (goods and services) exist.

2.63 The preferred method of valuation of output is at basic prices, although producers' prices may be used when valuation at basic prices is not feasible. The distinction is related to the treatment of taxes and subsidies on products. Basic prices are prices before taxes on products are added and subsidies on products are subtracted. Producers' prices include, in addition to basic prices, taxes less subsidies on products other than value added type taxes. Thus three valuations of output may be encountered: at basic prices, at producers' prices in the absence of value added type taxes, and at producers' prices in the presence of value added type taxes.

2.64 In the same set of accounts and tables, all transactions on the uses of goods and services (such as final consumption, intermediate consumption, capital formation) are valued at purchasers' prices. Purchasers' prices are the amounts paid by the purchasers, excluding the deductible part of value added type taxes. Purchasers' prices are the actual costs to the users.

2.65 The various methods of valuing output, with intermediate consumption always at purchasers' prices, imply consequences for the content and uses of value added (the difference between output and intermediate consumption) by a producer, a sector or an industry. When output is valued at basic prices, value added includes besides primary incomes due to labour and capital, only taxes less subsidies on production other than taxes less subsidies on products; when output is valued at producers' prices, value added includes taxes, less subsidies, on products other than value added type taxes (which means all taxes, less subsidies, on products when value added type taxes do not exist). A complementary definition of value added is at factor cost, which excludes taxes on production of any kind.

Volume measures and measures in real terms

2.66 Up until this point, only current values have been described. In addition, the System includes calculation of some transactions in volume terms, that is, the use of the systems of prices which prevailed in a past period. The changes over time in the current values of flows of goods and services and of many kinds of assets can be decomposed into changes in the prices of these goods and services or assets and changes in their volumes. Flows or stocks in volume terms take into account the changes in the price of each item covered. However, many flows or stocks do not have price and quantity dimensions of their own. Their current values may be deflated by taking into account the change in the prices of some relevant basket of goods and services or assets, or the change in the general price level. In that case, flows or stocks are said to be in real terms (at constant purchasing power). For example, the System provides for the calculation of income in real terms. Inter-spatial comparisons raise similar but even more complex problems than inter-temporal comparisons. The additional difficulty is due mainly to the fact that countries at different stages of development are involved.

2.67 Both inter-temporal and inter-spatial measures are discussed in chapter 15.

4. Consolidation and netting

Consolidation

2.68 Consolidation may cover various accounting procedures. In general, it refers to the elimination, both from uses and resources, of transactions which occur between units that are grouped together and to the elimination of financial assets and the counterpart liabilities.

2.69 For sub-sectors or sectors, as a matter of principle flows between constituent units are not consolidated. However, consolidated accounts may be built up for complementary presentations and analyses. Even then, transactions appearing in different accounts are never consolidated to avoid changing the balancing items. Consolidation may be useful, for example, for the government sector as a whole, thus showing the net relations between government and the rest of the economy. This possibility is elaborated in chapter 22.

2.70 Accounts for the total economy, when fully consolidated, give rise to the rest of the world account (external transactions account).

Netting

2.71 Consolidation must be distinguished from netting. For current transactions, netting refers to offsetting uses against resources. The System does this only in a few specific instances; for example, taxes on products may be shown net of subsidies on products. For changes in assets or changes in liabilities, netting may be envisaged in two ways. The first case is where various types of changes in assets (for example, entries in inventories and withdrawals from inventories) or various types of liabilities (for example, incurrence of a new debt and redemption of an existing debt) are netted. The second case is where changes in financial assets and changes in liabilities (or, in the balance sheet, financial assets and liabilities themselves) related to a given financial instrument are netted. As a matter of principle, the System discourages netting beyond the degree shown in the classifications of the System. Netting financial assets (changes in financial assets) against liabilities (changes in liabilities) is especially to be avoided. Netting is discussed in chapters 3 and 11.

D. The accounts

1. Introduction

2.72 With the tools introduced in sections B and C above, all flows and stocks can be recorded. This is done in the accounts of the System. Each account relates to a particular aspect of economic behaviour. It contains flows or stocks and shows the entries for an institutional unit, a group of units such as a sector or the rest of the world. Typically the entries in the account do not conceptually balance so a balancing item must be introduced. Balancing items are meaningful measures of economic performance in themselves. When calculated for the whole economy, they constitute significant aggregates.

2.73 The accounts can be divided into two main classes:

a. The integrated economic accounts; and

b. The other parts of the accounting structure.

2.74 The integrated economic accounts use the first three of the conceptual elements of the System described in section B, (institutional units and sectors, transactions and assets and liabilities) together with the concept of the rest of the world to form a wide range of accounts. These include the full sequence of accounts for institutional sectors, separately or collectively, the rest of the world and the total economy. The full sequence of accounts is described briefly below. A full description of each of the accounts concerned is the subject matter of chapters 6 to 13. The rest of the world account is described in chapter 26.

2.75 The other parts of the accounting system bring in the three other conceptual elements from section B, that is, establishments, products and purposes as well as population and employment. The accounts covered here include the supply and use framework, which is the subject of chapter 14, population and employment tables which are described in chapter 19, the three dimension analysis of financial transactions and stocks of financial assets and liabilities, showing the relations between sectors (from-whom-to-whom) described in chapter 27 and functional analyses, whereby certain transactions of institutional sectors are presented according to the purpose they serve. These appear in a number of chapters including chapter 14.

2.76 The sections following are devoted to:

a. The full sequence of accounts;

b. An integrated presentation of the accounts including the goods and services account, the accounts for the rest of the world and an examination of the aggregates of the System; and

c. The other parts of the accounting structure.

2. The full sequence of accounts

2.77 Before presenting the full sequence of accounts for institutional units and sectors, some preliminary remarks are useful. The purpose of this sub-section is to explain the accounting structure of the System in general, not to show the precise content of the accounts for each specific unit or sector. The accounting structure is uniform throughout the System. It applies to all institutional units, sub-sectors, sectors and the total economy. However, some accounts may not be relevant for certain sectors. Similarly, not all transactions are relevant for each sector and, when they are, they may constitute resources for some sectors and uses for others.

2.78 Another remark relates to the way the classification of transactions is used when presenting the general structure of the accounts. Section B above shows only the main categories of transactions, not the detailed ones which are displayed in the relevant chapters of the manual. However, in order to make the accounts clear, it is necessary to include a number of specific transactions. This is done by using the actual classification of transactions in the System at a level of detail sufficient for a good understanding of the accounts. However, definitions of these transactions are not given at this stage, unless absolutely necessary. However, the coding schemes used in the accounts is included. The full list of transactions, other flows and assets with their associated codes appears in Annex 1.

2.79 It is also worth noting that balancing items can be expressed gross or net, the difference being the consumption of fixed capital. Conceptually, net balancing items are much more meaningful. However, gross concepts, specifically gross aggregates, are widely used and gross accounts are often estimated more easily, accurately and promptly than the net ones. In order to accommodate both solutions and to ease the integrated presentation of the accounts and aggregates, a double presentation of balancing items is allowed.

2.80 Finally, it has to be said that the sequence of accounts shows the accounting structure of the System; it is not necessarily a format for publishing the results.

Table 2.1: The production account

	Uses		Resources
		P1	Output
P2	Intermediate consumption		
B1	*Value added*		

The three sections of the sequence of accounts

2.81 The accounts are grouped into three categories: current accounts, accumulation accounts, balance sheets.

2.82 Current accounts deal with production, the generation, distribution and use of income. Each account starts with the balancing item of the previous one recorded as resources. The last balancing item is saving which, in the context of the System, is that part of income originating in production, domestically or abroad that is not used for final consumption.

2.83 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). The accounts concerned are the capital account, financial account, the other changes in the volume of assets account and the revaluation account. The accumulation accounts show all changes which occur between two balance sheets. Balance sheets present stocks of assets and liabilities and net worth. Opening and closing balance sheets are included with the full sequence of accounts. Even when balance sheets are not compiled, a clear understanding of the conceptual relationship between accumulation accounts and balance sheets is necessary if the accumulation accounts themselves are to be correctly elaborated.

The production account

2.84 The production account (shown in table 2.1), is designed to show value added as one of the main balancing items in the System. Consequently, it does not cover all transactions linked with the production process, but only the result of production (output) and the using up of goods and services when producing this output (intermediate consumption). Intermediate consumption does not cover the progressive wear and tear of fixed capital. The latter is recorded as a separate transaction (consumption of fixed capital) which is the difference between the gross and net balancing items.

2.85 As already explained in section C, different types of valuation of output may be used according to the choice made between basic prices and producers' prices and, in the latter case, the existence or absence of value added type taxes. Consequently, the extent to which taxes (less subsidies) on products are included in value added differs.

2.86 All institutional sectors have a production account. However, in the production account of institutional sectors, output and intermediate consumption are shown in total only, not broken down by products.

2.87 The balancing item of the production account is value added. Like all items in the current accounts, the balancing item may be measured gross or net.

The distribution of income accounts

2.88 The process of distribution and redistribution of income is so important that it is worth distinguishing various steps and depicting them separately in different accounts. The distribution of income is decomposed into three main steps: primary distribution, secondary distribution and redistribution in kind. As long as all kinds of distributive current transactions included in the System are actually measured, increasing the number of accounts adds very little to the work already done, but it allows the introduction of balancing items that are meaningful concepts of income.

The primary distribution of income account

2.89 The primary distribution of income account shows how gross value added is distributed to labour, capital, government and, where necessary, flows to and from the rest of the world. In fact the primary distribution of income account is never presented as a single account but always as two sub-accounts. The first of these is the generation of income account (shown in table 2.2) in which value added is distributed to labour (compensation of employees), capital and government (taxes on production and imports less subsidies as far as they are included in the valuation of output). The distribution to capital appears as the balancing item in this account, operating surplus or mixed income.

2.90 The allocation of primary income account (table 2.3) shows the remaining part of the primary distribution of income. It contains operating surplus or mixed income as a resource. It records, for each sector, property income receivable and payable, and compensation of employees and taxes, less subsidies, on production and imports receivable by households and government, respectively. Since transactions of this kind may appear in the rest of the world account, these must be included also.

2.91 The balancing item of the allocation of primary income account (and of the complete primary distribution of income account) is the balance of primary income.

Table 2.2: The generation of income account

	Uses		Resources
		B1	*Value added*
D1	Compensation of employees		
D2	Taxes on production and imports		
D3	Subsidies (-)		
B2	*Operating surplus, net*		
B3	*Mixed income, net*		

Table 2.3: The allocation of primary income account

Uses		Resources	
		B2	*Operating surplus, net*
		B3	*Mixed income, net*
		D1	Compensation of employees
		D2	Taxes on production and imports
		D3	Subsidies (-)
D4	Property income	D4	Property income
B5	*Balance of primary incomes*	B5	

2.92 For non-financial and financial corporations, the allocation of primary income account is further subdivided in order to show an additional balancing item, entrepreneurial income, which is closer to the concept of current profit before tax familiar in business accounting. This balancing item and the related sub-accounts are shown in chapter 7.

The secondary distribution of income account

2.93 The secondary distribution of income account (table 2.4) covers redistribution of income through transfers other than social transfers in kind made by government and NPISHs to households. Social transfers in kind are recorded in the redistribution of income in kind account. The secondary distribution of income account records as resources, in addition to balance of primary incomes, current taxes on income, wealth, etc. and other current transfers except social transfers in kind. On the uses side, the same types of transfers are also recorded. Since these transfers are resources for some sectors and uses for others also, their precise content varies from one sector to another

2.94 It is worth explaining in some detail here the way social contributions are recorded in the System. Although employers normally pay social contributions on behalf of their employees directly to the social insurance schemes, in the System these payments are treated as if they were made to employees who then make payments to social insurance schemes. In terms of the accounts, this means that they first appear as a component of compensation of employees in the use side of the generation of income account of employers and the resource side of allocation of primary income account of households (adjusted of course for external flows in compensation of employees). Then they are recorded as uses in the secondary distribution of income account of households (and possibly of the rest of the world), and as resources of the sectors managing social insurance schemes. All employers' social contributions follow this route. This way of recording transactions as if they followed another course is often called "rerouting".

2.95 The balancing item of the secondary distribution of income account is disposable income. For households, this is the income which can be used for final consumption expenditure and saving. For non-financial and financial corporations, disposable income is income not distributed to owners of equity remaining after taxes on income are paid.

The redistribution of income in kind account

2.96 Because of the nature of the transactions concerned, this account is significant only for government, households and NPISHs. The redistribution of income in kind account (table 2.5) records as resources disposable income and, for households, social transfers in kind. Then, on the uses side, social transfers in kind appear for government and NPISHs. Social transfers in kind cover two more elements in the portrayal of the redistribution process. The first of these is non-market production by government and NPISHs of individual services and the second is the purchase by government and NPISHs of goods and services for transfer to households free or at prices that are not economically significant.

Table 2.4: The secondary distribution of income account

Uses		Resources	
		B5	*Balance of primary incomes*
D5	Current transfers	D5	Current transfers
D51	Current taxes on income, wealth, etc.	D51	Current taxes on income, wealth, etc.
D52	Net social contributions	D52	Net social contributions
D53	Social benefits other than social transfers in kind	D53	Social benefits other than social transfers in kind
D54	Other current transfers	D54	Other current transfers
B6	*Disposable income*		

Table 2.5. The redistribution of income in kind account

Uses		Resources	
		B6	*Disposable income*
D6	Social transfers in kind	D6	Social transfers in kind
B7	*Adjusted disposable income*		

2.97 The purpose of this account is fourfold. In the first place it aims at giving a clearer picture of the role of government as the provider of goods and services to individual households. Secondly, it delivers a more complete measure of household income. Thirdly, it facilitates international comparisons and comparisons over time when economic and social arrangements differ or change. Fourthly, it gives a more complete view of the redistribution process between sub-sectors or other groupings of households. Redistribution of income in kind is a tertiary distribution of income.

2.98 The balancing item of the redistribution of income in kind account is adjusted disposable income.

The use of income accounts

2.99 The use of income account exists in two variants, the use of disposable income account (table 2.6) and the use of disposable income account (table 2.7). The use of disposable income account has the balancing item from the secondary distribution of income account, disposable income, as a resource. The use of adjusted disposable income account has the balancing item from the redistribution of income in kind account, adjusted disposable income, as a resource. Both accounts show how, for those sectors that undertake final consumption (that is, government, NPISHs and households), disposable income or adjusted disposable income is allocated between final consumption and saving. In addition, both variants of the use of income account include, for households and for pension funds, an adjustment item (D.7 change in pension entitlements) which relates to the way transactions between households and pension funds are recorded in the System. This adjustment item, which is explained in chapter 9, is not discussed here.

2.100 The difference between the resources of the two variants of the use of income account depends on which balancing item is carried down from an earlier account. In terms of uses, the difference is between whether final consumption expenditure is recorded (in the use of disposable income account) or actual final consumption (in the use of adjusted disposable income account).

2.101 Final consumption expenditure covers transactions on final consumption of goods and services for which a sector is the ultimate bearer of the expense. Government and NPISHs produce non-market goods and services in their production account, where intermediate consumption or compensation of employees are recorded as uses. Final consumption expenditure of these producers relates to the value of their output of non-market goods and services, less their receipts from the sale of non-market goods and services at prices which are not economically significant. However, it also covers goods and services that are purchased by government or NPISHs for ultimate transfer, without transformation, to households.

2.102 Actual final consumption of households covers goods and services which are effectively available for individual consumption by households, regardless of whether the ultimate bearer of the expense is government, NPISHs or households themselves. Actual final consumption of government and NPISHs is equal to consumption expenditure less social transfers in kind, or, in other words, collective consumption.

2.103 At the total economy level, disposable income and adjusted disposable income are equal, as are final consumption expenditure and actual final consumption. They differ only when considering the relevant sectors. For each sector, the difference between final consumption expenditure and actual final consumption is equal to social transfers in kind, provided or received. It is also equal to the difference between disposable income and adjusted disposable income. Thus the figures for saving are the same in both variants of the use of income account as income on the resources side and consumption on the uses side differ by the same amount.

2.104 The balancing item of the use of income account, in its two variants, is saving. Saving ends the sub-sequence of current accounts.

Table 2.6: The use of disposable income account

	Uses		Resources
		B6	*Disposable income*
P3	Final consumption expenditure	P3	
D7	Change in pension entitlements	D7	Change in pension entitlements
B8	*Saving*		

Table 2.7: The use of adjusted disposable income account

	Uses		Resources
		B7	*Adjusted disposable income*
P4	Actual final consumption	P4	
D7	Change in pension entitlements	D7	Change in pension entitlements
B8	*Saving*		

The accumulation accounts

2.105 Saving, being the balancing items of all current transactions or accounts is the starting element of accumulation accounts.

2.106 A first group of accounts covers transactions which would correspond to all changes in assets or liabilities and net worth if saving and capital transfers were the only sources of changes in net worth. The accounts concerned are the capital account and the financial account. These two accounts are distinguished in order to show a balancing item which is useful for economic analysis, that is, net lending or net borrowing.

2.107 A second group of accounts relates to changes in assets, liabilities and net worth due to other factors. Examples are discoveries or depletion of subsoil resources, destruction by political events, such as war, or by natural catastrophes, such as earthquakes. Such factors actually change the volume of assets, either physically or quantitatively. Other changes in assets may also be linked with changes in the level and structure of prices. In the latter case, only the value of assets and liabilities is modified, not their volume. Thus the second group of accumulation accounts is subdivided between an account for other changes in volume of assets and an account for revaluation.

The capital account

2.108 The capital account (table 2.8) records transactions linked to acquisitions of non-financial assets and capital transfers involving the redistribution of wealth. The right-hand side includes saving, net, and capital transfers receivable and capital transfers payable (with a minus sign) in order to arrive at that part of changes in net worth due to saving and capital transfers. The capital account includes among uses the various types of investment in non-financial assets. Because consumption of fixed capital is a negative change in fixed assets, it is recorded, with a negative sign, on the left-hand side of the account. Recording gross fixed capital formation less consumption of fixed capital on the same side is equivalent to recording net fixed capital formation.

2.109 The balancing item of the capital account is called net lending when positive and measuring the net amount a unit or a sector finally has available to finance, directly or indirectly, other units or sectors, or net borrowing when negative, corresponding to the amount a unit or a sector finally is obliged to borrow from others.

The financial account

2.110 The financial account (table 2.9) records transactions in financial instruments for each financial instrument. These transactions in the System show net acquisition of financial assets on the left-hand side or net incurrence of liabilities on the right-hand side.

2.111 The balancing item of the financial account is again net lending or net borrowing, which appears this time on the right-hand side of the account. In principle, net lending or net borrowing is measured identically in both the capital and financial accounts. In practice, achieving this identity is one of the most difficult tasks in compiling national accounts.

Table 2.8: The capital account

	Changes in assets		Changes in liabilities and net worth
		B8	*Saving*
P51g	Gross fixed capital formation		
P6	Consumption of fixed capital (-)		
P52	Changes in inventories		
P53	Acquisitions less disposals of valuables		
NP	Acquisitions less disposals of non-produced assets		
		D8r	Capital transfers, receivable (+)
		D8p	Capital transfers payable (-)
	Net lending (+) / net borrowing (–)	B101	*Changes in net worth due to saving and capital transfers*

Table 2.9: The financial account

	Changes in assets		Changes in liabilities and net worth
			Net lending (+) / net borrowing (–)
	Net acquisition of financial assets		Net acquisition of financial liabilities
F1	Monetary gold and SDRs	F1	Monetary gold and SDRs
F2	Currency and deposits	F2	Currency and deposits
F3	Debt securities	F3	Debt securities
F4	Loans	F4	Loans
F5	Equity and investment fund shares	F5	Equity and investment fund shares
F6	Insurance, pension and standardised guarantee schemes	F6	Insurance, pension and standardised guarantee schemes
F7	Financial derivatives and employee stock options	F7	Financial derivatives and employee stock options
F8	Other accounts receivable/payable	F8	Other accounts receivable/payable

The other changes in the volume of assets account

2.112 The other changes in the volume of assets account (table 2.10) records the effect of exceptional events that cause not only the value but also the volume of assets and liabilities to vary. In addition to the kind of events referred to above, such as the consequences of war or earthquakes, this account also includes some adjustment elements such as changes in classification and structure which may or may not have an influence on net worth (see chapter 12). The balancing item, changes in net worth due to other changes in volume of assets, is recorded on the right-hand side.

The revaluation account

2.113 The revaluation account (table 2.11) records holding gains or losses. It starts with nominal holding gains and losses. This item records the full change in value of the various assets or liabilities due to the change in the prices of those assets and liabilities since the beginning of the accounting period or the time of entry and the time of exit or the end of the accounting period.

2.114 Just as transactions and other flows in assets appear on the left of the account and transactions in liabilities on the right, so nominal gains or losses on assets appear on the left-hand side of the revaluation account, while nominal gains and losses on financial liabilities are recorded on the right-hand side. A positive revaluation of financial liabilities is equivalent to a nominal holding loss; a negative revaluation of liabilities is equivalent to a nominal holding gain.

2.115 The balancing item of the revaluation account is changes in net worth due to nominal holding gains and losses.

Table 2.10: The other changes in the volume of assets account

	Changes in assets		Changes in liabilities and net worth
K1	Economic appearance of assets	K1	Economic appearance of assets
K2	Economic disappearance of non-produced assets	K2	Economic disappearance of non-produced assets
K3	Catastrophic losses	K3	Catastrophic losses
K4	Uncompensated seizures	K4	Uncompensated seizures
K5	Other changes in volume n.e.c.	K5	Other changes in volume n.e.c.
K6	Changes in classification	K6	Changes in classification
	Total other changes in volume		Total other changes in volume
AN1	Produced assets	AN1	Produced assets
AN2	Non-produced assets	AN2	Non-produced assets
AF	Financial assets	AF	Financial assets
AF8	Other accounts receivable/payable	AF8	Other accounts receivable/payable
		B102	*Changes in net worth due to other changes in volume of assets*

Table 2.11: The revaluation account

	Changes in assets		Changes in liabilities and net worth
	Nominal holding gains and losses		
AN	Non-financial assets	AN	Non-financial assets
AN1	Produced assets	AN1	Produced assets
AN2	Non-produced assets	AN2	Non-produced assets
AF	Financial assets/liabilities	AF	Financial assets/liabilities
		B103	*Changes in net worth due to nominal holding gain and losses*
	Neutral holding gains and losses		
AN	Non-financial assets	AN	Non-financial assets
AN1	Produced assets	AN1	Produced assets
AN2	Non-produced assets	AN2	Non-produced assets
AF	Financial assets/liabilities	AF	Financial assets/liabilities
		B1031	*Changes in net worth due to neutral holding gains and losses*
	Real holding gains and losses		
AN	Non-financial assets	AN	Non-financial assets
AN1	Produced assets	AN1	Produced assets
AN2	Non-produced assets	AN2	Non-produced assets
AF	Financial assets/liabilities	AF	Financial assets/liabilities
		B1032	*Changes in net worth due to real holding gains and losses*

2.116 Nominal holding gains and losses are subdivided between two components. The first shows the revaluation in proportion to the general price level which is obtained by applying, during the same periods of time, an index of the change in general price level to the initial value of all assets or liabilities, even to those that are fixed in monetary terms. The results of this operation are called neutral holding gains and losses because all assets and liabilities are revalued so as to preserve exactly their purchasing power.

2.117 The second component of holding gains and losses shows the difference between nominal holding gains and losses and neutral holding gains and losses. This difference is called real holding gains and losses. If the nominal holding gains and losses are higher than the neutral holding gains and losses, there is a real holding gain, due to the fact that on average the actual prices of the assets in question have increased more (or decreased less) than the general price level. In other words, the relative prices of its assets have increased. Similarly, a decrease in relative prices of assets leads to a real holding loss.

2.118 Each of the three types of holding gains or losses are subdivided according to the main groups of assets and liabilities, a decomposition which is necessary even in a simplified accounting presentation. Changes in net worth due to nominal holding gains and losses can be subdivided into changes due to neutral holding gains and losses and changes due to real holding gains and losses.

Balance sheets

2.119 The opening and closing balance sheets (table 2.12), display assets on the left-hand side, liabilities and net worth on the right-hand side. Assets and liabilities, as previously explained, are valued at the prices of the date a balance sheet is established.

2.120 The balancing item of balance sheets is net worth, the difference between assets and liabilities. Net worth is equivalent to the present value of the stock of economic value a unit or a sector holds.

2.121 The changes in balance sheet recapitulate the content of the accumulation accounts, that is, the entry for each asset or liability is the sum of the entries in the four accumulation accounts corresponding to that asset or liability. The changes in net worth can be calculated from these entries but must by definition be equal to the changes in net worth due to saving and capital transfers from the capital account plus changes in net worth due to other changes in the volume of assets from the other changes in the volume of assets account plus nominal holding gains and losses from the revaluation account.

2.122 Conceptually, the entries for the closing balance sheet are equal, asset by asset and liability by liability to the entries in the opening balance sheet plus the changes recorded in the four accumulation accounts.

Table 2.12:The opening balance sheet, changes in assets and liabilities and closing balance sheet

	Stocks and changes in assets		Stocks and changes in liabilities
	Opening balance sheet		
AN	Non-financial assets	AN	Non-financial assets
AN1	Produced assets	AN1	Produced assets
AN2	Non-produced assets	AN2	Non-produced assets
AF	Financial assets/liabilities	AF	Financial assets/liabilities
		B90	Net worth
	Changes in balance sheets		
AN	Non-financial assets	AN	Non-financial assets
AN1	Produced assets	AN1	Produced assets
AN2	Non-produced assets	AN2	Non-produced assets
AF	Financial assets/liabilities	AF	Financial assets/liabilities
		B10	Changes in net worth, total
		B101	*Saving and capital transfers*
		B102	*Other changes in volume of assets*
		B103	*Nominal holding gains and losses*
	Closing balance sheet		
AN	Non-financial assets	AN	Non-financial assets
AN1	Produced assets	AN1	Produced assets
AN2	Non-produced assets	AN2	Non-produced assets
AF	Financial assets/liabilities	AF	Financial assets/liabilities
		B90	Net worth

3. An integrated presentation of the accounts

2.123 It is now possible to put together the various elements which have been introduced in the previous sub-sections and to present in detail the integrated economic accounts. Table 2.13 gives a simplified version of the integrated current accounts. It is formed by taking each of tables 2.1, 2.2, 2.3, 2.4 and 2.6 and placing them immediately one under the other. In this presentation the transactions and other flows are shown in the middle of the table with columns to the left for the uses and columns to the right for resources. In a full presentation of this type there would be one column for each sector or sub-sector of interest. In the interest of introducing the table in a simple manner, only four columns are shown in table 2.13. The first of these represents the sum of all the five sectors of the total economy (non-financial corporations, financial corporations, general government, NPISHs and households). There follows a column for the rest of the world, then one headed goods and services and the last is a column representing the sum of the previous three. This column has little economic meaning but is a critical way of ensuring that the tables are complete and consistent since the totals on the left-hand side and right-hand side of the accounts must be equal line by line. (When balancing items are shown as the last item in one account and the first in the next account, this equality is misaligned but still obvious.)

2.124 Table 2.14 shows the continuation of the integrated accounts, including the accumulation accounts and balance sheets as previously presented in tables 2.8, 2.9, 2.10, 2.11 and 2.12. Here the columns to the left represent assets or changes in assets and columns to the right liabilities or changes in liabilities and net worth. Together tables 2.13 and 2.14 make up the integrated economic accounts. The data in the two tables are drawn from the numerical example that runs through the entire manual. The tables for each account in chapters 6 to 13 are expanded versions of the tables shown here with columns for all institutional sectors and a full set of transactions and other flows for each of these accounts. A composite version of the tables, with all the details just mentioned, appears in Annex 2.

2.125 The integrated economic accounts give a complete picture of the accounts of the total economy including balance sheets, in a way which permits the principal economic relations and the main aggregates to be shown. This table shows, simultaneously, the general accounting structure of the System and presents a set of data for the institutional sectors, the economy as a whole and the rest of the world.

2.126 The presentation of the integrated accounts in this form is one of several ways in which a bird's eye view of the accounts can be obtained. Another way is by means of a diagram such as figure 2.1, which gives the same information in schematic form.

2.127 The integrated economic accounts provide an overview of the economy as a whole. As already indicated, the integrated presentation contains much more than what has actually been included in the table and may be used for giving a more detailed view if so desired. Columns might be introduced for sub-sectors. The rest of the world column can subdivided according to various geographical zones. The column for goods and services may show market goods and services separately. The classification of transactions in the rows might be used at more detailed levels, and so on. However, including more detail directly in this scheme at the same time would result in a very complicated and unmanageable table. For this reason, more detailed analysis of production and transactions in goods and services, transactions in financial instruments, detailed balance sheets, as well as analysis by purpose are done in other frameworks. These are presented in the next section and their links with the integrated economic accounts are also explained.

The rest of the world accounts

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

2.129 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 nation and vice versa. If a balancing item is positive, it means a surplus of the rest of the world and a deficit of the nation, and vice versa if the balancing item is negative.

2.130 The external account of goods and services is shown at the same level as the production account for institutional sectors. Imports of goods and services (499) are a resource for the rest of the world, exports (540) are a use. The external balance of goods and services is (-41). With a positive sign, it is a surplus of the rest of the world (a deficit of the nation) and vice versa. To this are added or deducted the various kinds of taxes, compensation of employees and other current transfers payable to, and receivable from, the rest of the world. The current external balance is -32, indicating a deficit for the rest of the world but a surplus for the national economy. Again, if it had a positive sign, it would be a surplus of the rest of the world (a deficit of the nation).

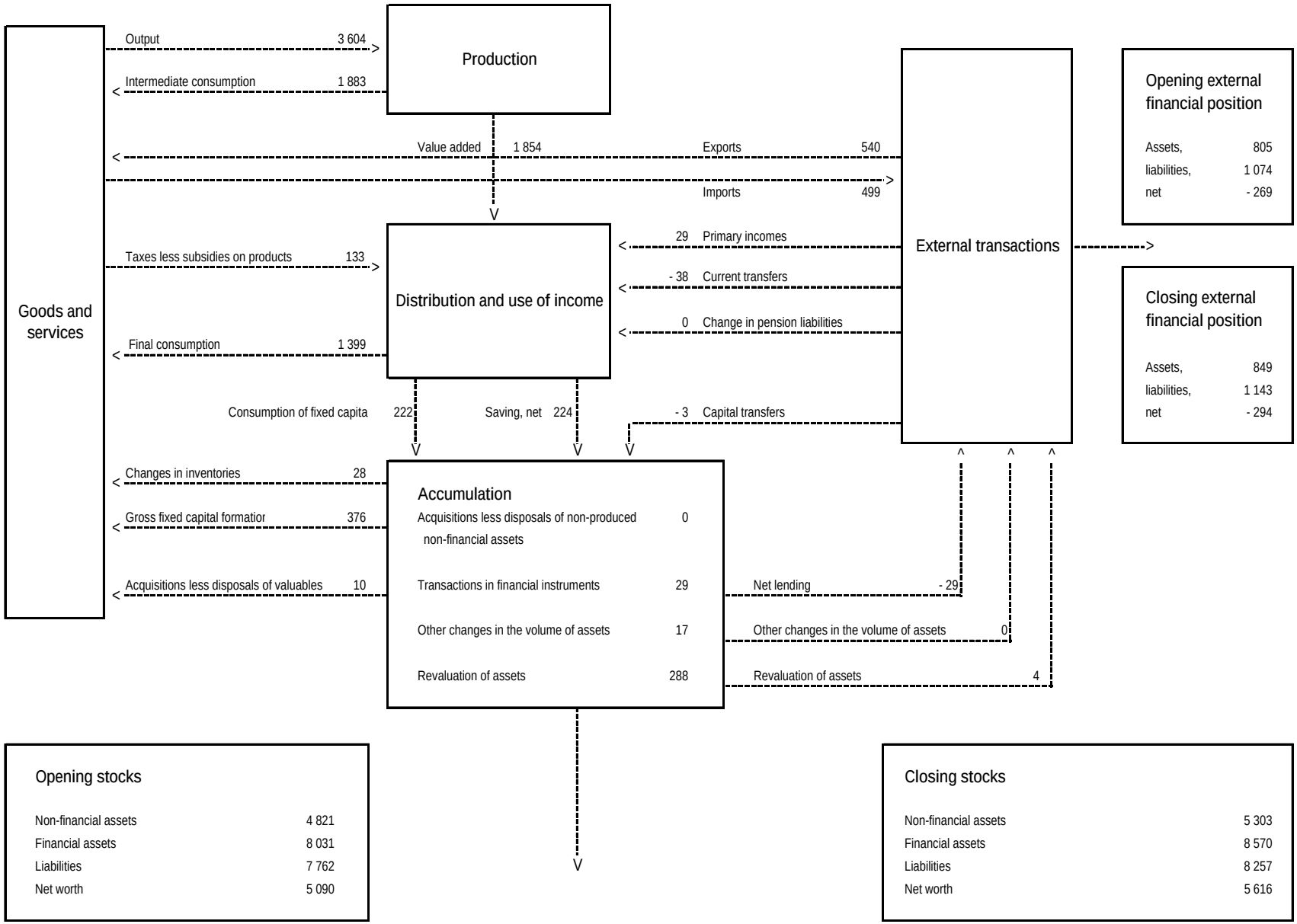
Table 2.13: Integrated presentation of the full sequence of current accounts

Uses						Resources				
S1 Total economy	S2 Rest of the world	Goods and services	Total	Code	Transactions and balancing items	S1 Total economy	S2 Rest of the world	Goods and services	Total
		499	499	P8	Imports of goods and services		499		499
	540		540	P7	Exports of goods			540	540
					Production account				
		3 604	3 604	P1	Output	3 604			3 604
1 883			1 883	P2	Intermediate consumption			1 883	1 883
		141	141	D21	Taxes on products	141			141
		- 8	- 8	D31	Subsidies on products (-)	- 8			- 8
1 854			1 854	B1g	Value added, gross / Gross domestic product				
222			222	P6	Consumption of fixed capital				
1 632			1 632	B1n	*Value added, net / Net domestic product*				
	- 41		- 41	B11	*External balance of goods and services*				
					Generation of income account				
				B1n	*Value added, net / Net domestic product*	1 632			1 632
769			769	D1	Compensation of employees				
235			235	D2	Taxes on production and imports				
141			141	D21	Taxes on products				
94			94	D29	Other taxes on production				
- 44			- 44	D3	Subsidies				
- 8			- 8	D31	Subsidies on products				
- 36			- 36	D39	Other subsidies on production				
240			240	B2n	*Operating surplus, net*				
432			432	B3n	*Mixed income, net*				
					Allocation of primary income account				
					Operating surplus, gross	452			459
					Mixed income, gross	442			442
					Operating surplus, net	240			247
					Mixed income, net	432			432
	6		6	D1	Compensation of employees	773	2		775
			0	D2	Taxes on production and imports	235			235
			0	D3	Subsidies	- 44			- 44
413	63		476	D4	Property income	438	38		476
1 661			1 661	B5n	*Balance of primary income, net / National income, net*				0
					Secondary distribution of income account				
					Balance of primary incomes, gross / National income, gross	1 883			1 883
					Balance of primary income, net / National income, net	1 661			1 661
1 212	17		1 229	D5	Current transfers	1 174	55		1 229
212	1		213	D51	Current taxes on income, wealth, etc.	213	0		213
283	16		299	D54	Other current transfers	244	55		299
1 623			1 623		*Disposable income, net*				
					Use of disposable income account				
					Disposable income, gross	1 845			1 845
					Disposable income, net	1 623			1 623
1 399			1 399	P3	Final consumption expenditure			1 399	1 399
11	0		11	D7	Change in pension entitlements	11	0		11
446			446	B8g	Saving, gross				
224			224	B8n	*Saving, net*				
	- 32		- 32	B12	*Current external balance*				

Table 2.14: Integrated presentation of the full sequence of accumulation accounts and balance sheets

Changes in assets						Changes in liabilities and net worth			
S1	S2					S1	S2		
Total economy	Rest of the world	Goods and services	Total	Code	Transactions and balancing items	Total economy	Rest of the world	Goods and services	Total
					Capital account				
				B8n	*Saving, net*	224			224
				B12	*Current external balance*		- 32		- 32
414			414	P5g	Gross capital formation			414	414
192			192	P51n	*Net capital formation*			192	192
376			376	P51g	Gross fixed capital formation			376	376
- 222			- 222	P6	Consumption of fixed capital			- 222	- 222
				AN11	*Gross fixed capital formation by type of asset*				
28			28	*AN12*	Changes in inventories			28	28
10			10	*AN13*	Acquisitions less disposals of valuables			10	10
0			0	NP	Acquisitions less disposals of non-produced assets			0	0
				D8r	Capital transfers, receivable	62	4		66
				D8p	Capital transfers, payable	- 65	- 1		- 66
					Changes in net worth due to saving and capital transfers	221	- 29		192
29	- 29		0		*Net lending (+) / net borrowing (–)*				
					Financial account				
					Net lending (+) / net borrowing (–)	29	- 29		0
450	37		487		Net acquisition of financial assets/liabilities	421	66		487
- 1	1		0	F1	Monetary gold and SDRs				
97	11		108	F2	Currency and deposits	110	- 2		108
82	9		91	F3	Debt securities	71	20		91
77	4		81	F4	Loans	36	45		81
117	2		119	F5	Equity and investment fund shares	105	14		119
48	0		48	F6	Insurance, pension and standardised guarantee schemes	48	0		48
14	0		14	F7	Financial derivatives and employee stock options	11	3		14
16	10		26	F8	Other accounts receivable/payable	40	- 14		26
					Other changes n the volume of asssets account				
15			15		Total other changes in volume	- 2			- 2
- 7			- 7	*AN1*	Produced assets				
17			17	*AN2*	Non-produced assets				
5			5	*AF*	Financial assets	- 2			- 2
0			0	*AF8*	Other accounts receivable/payable				
					Changes in net worth due to other changes in volume of assets	17			
					Revaluation account				
					Nominal holding gains and losses				
280			280	*AN*	Non-financial assets				
84	7		91	*AF*	Financial assets/liabilities	76	3		79
					Changes in net worth due to nominal holding gains/losses	288	4		292
					Neutral holding gains and losses				
198			198	*AN*	Non-financial assets				
136	12		148	*AF*	Financial assets/liabilities	126	6		132
					Changes in net worth due to neutral holding gains/losses	208	6		214
					Real holding gains and losses				
82			82	*AN*	Non-financial assets				
- 52	- 5		- 57	*AF*	Financial assets/liabilities	- 50	- 3		- 53
					Changes in net worth due to real holding gains/losses	80	- 2		78
					Opening balance sheet				
4 821			4 821	*AN*	Non-financial assets				
8 031	805		8 836	*AF*	Financial assets/liabilities	7 762	1 074		8 836
					Net worth	5 090	- 269		4 821
					Total changes in assets and liabilities				
499			499	*AN*	Non-financial assets				
539	44		583	*AF*	Financial assets/liabilities	495	69		564
					Changes in net worth, total	535	- 25		510
					Changes in net worth due to :				
					Saving and capital transfers	230	- 29		201
					Other changes in volume of assets	17			17
					Nominal holding gains/losses	288	4		292
					Closing balance sheet				
5 320			5 320	*AN*	Non-financial assets				
8 570	849		9 419	*AF*	Financial assets/liabilities	8 257	1 143		9 400
					Net worth	5 625	- 294		5 331

Figure 2.1: Diagram of the integrated accounts for the total economy



The goods and services account

2.131 As noted above, the integrated presentation of the account includes a column on each side labelled goods and services. Entries in these columns reflect the various transactions in goods and services that appear in the accounts of the institutional sectors. Uses of goods and services in the institutional sectors accounts are reflected on the right-hand column for goods and services; resources of goods and services in the institutional sectors accounts are reflected on the left-hand column for goods and services. On the resources side of the table, the figures appearing in the column for goods and services are the counterparts of the uses made by the various sectors and the rest of the world: exports (540), intermediate consumption (1 883), final consumption (1 399), gross fixed capital formation (376), changes in inventories (28) and acquisitions less disposals of valuables (10). On the use side of the table, the figures in the column for goods and services are the counterparts of the resources of the various sectors and the rest of the world: imports (499) and output (3 604). Taxes on products (less subsidies) are also included on the resource side of the accounts. The coverage of this item varies according to the way output is valued (see the discussion on valuation in section C). The part (possibly the total) of taxes on products (less subsidies), that is not included in the value of output does not originate in any specific sector or industry; it is a resource of the total economy. In the numerical example taxes, less subsidies, on products (133) are shown directly in the column for goods and services. They are a component of the value of the supply of goods and services which has no counterpart in the value of the output of any institutional sector.

2.132 The goods and services accounts is a particularly important account as it forms the basis of the most familiar definition of GDP. Table 2.15 show the account in the same format as earlier tables in the chapter (though with numeric values included).

The aggregates

2.133 The aggregates of the System, such as value added, income, consumption and saving, are composite values which measure one aspect of the activity of the entire economy. They are summary indicators and key magnitudes for purposes of macroeconomic analysis and comparisons over time and space. The System aims to provide a simplified but complete and detailed picture of complex economies, so the calculation of the aggregates is neither the sole nor the main purpose of national accounting; nevertheless summary figures are very important.

2.134 Some aggregates may be obtained directly as totals of particular transactions in the System; examples are final consumption, gross fixed capital formation and social contributions. Others may result from aggregating balancing items for the institutional sectors; examples are value added, balance of primary incomes, disposable income and saving. They may need some further elaboration. However, some of them are so commonly used that they deserve additional explanation at this early stage.

2.135 An overview of the aggregates in the System and the accounts in which they appear is given in figure 2.2.

Gross domestic product (GDP)

2.136 Basically, GDP derives from the concept of value added. Gross value added is the difference between output and intermediate consumption. GDP is the sum of gross value added of all resident producer units plus that part (possibly the total) of taxes, less subsidies, on products which is not included in the valuation of output.

2.137 Next, GDP is also equal to the sum of the final uses of goods and services (all uses except intermediate consumption) measured at purchasers' prices, less the value of imports of goods and services.

2.138 Finally, GDP is also equal to the sum of primary incomes distributed by resident producer units.

Net and gross measures

2.139 The concept of value added should conceptually exclude the allowance for consumption of fixed capital. The latter, in effect, is not newly created value, but a reduction in the value of previously created fixed assets when they are used up in the production process. Thus, theoretically, value added is a net concept. This conclusion applies to domestic product as well; theoretically, domestic product should be a net concept. Net domestic product (NDP) is obtained by deducting the consumption of fixed capital from GDP.

Table 2.15 The goods and services account

	Uses				Resources
P2	Intermediate consumption	1 883	P1	Output	3 604
P3	Final consumption expenditure	1 399	P8	Imports of goods and services	499
P5g	Gross capital formation	414	D21	Taxes on products	141
P51g	Gross fixed capital formation	376	D31	Subsidies on products (-)	- 8
P52	Changes in inventories	28			
P53	Acquisitions less disposals of valuables	10			
P7	Exports of goods	540			
	Total uses	4 236		*Total resources*	4 236

2.140 However, gross measures of product and income are commonly used for various reasons. The depreciation of fixed assets as calculated in business accounting does not generally meet the requirements of the System. The calculation of consumption of fixed capital requires that statisticians estimate the present value of the stock of fixed assets, the lifetime of various types of assets, patterns of depreciation, etc. Not all countries make such calculations, and when they do there may be differences in methodology (with some of them using business data even when inadequate). Consequently, gross figures are more often available, or available earlier, and they are generally considered more comparable between countries. So GDP is broadly used even if it is, on a conceptual basis, economically inferior to NDP. However, NDP should also be calculated, with improved estimates of consumption of fixed capital when necessary, in order to provide a significant tool for various types of analysis.

Figure 2.2: Summary of the main accounts, balancing items and main aggregates

Account		Balancing item	Main aggregates
Current accounts			
Production account			
Production account	B1	Value added	Domestic product (GDP,NDP)
Distribution and use of income accounts			
Primary distribution of income accounts			
Generation of income account	B2	Operating surplus	
	B3	Mixed income	
Allocation of primary income account	B5	Balance of primary income	National income (GNI,NNI)
Entrepreneurial income account	B4	Entrepreneurial income	
Allocation of other primary income account	B5	Balance of primary income	
Secondary distribution of income account	B6	Disposable income	National disposable income
Redistribution of income in kind account	B7	Adjusted disposable income	
Use of income accounts			
Use of disposable income account	B8	Saving	
Use of adjusted disposable income account	B8	Saving	National saving
Accumulation accounts			
Capital account	B9	Net borrowing(+)/ net lending (-)	
Financial account	B9	Net borrowing(+)/ net lending (-)	
Other changes in assets accounts			
Other changes in the volume of assets account			
Revaluation account			
Balance sheets			
Opening balance sheet	B90	Net worth	National wealth
Changes in assets and liabilities	B10	Changes in net worth	
Closing balance sheet	B90	Net worth	National wealth
Contributions to change in net worth			
Capital account	*B101*	*Change in net worth due to saving and capital transfers*	
Other changes in the volume of assets account	*B102*	*Change in net worth due to other changes in the volume of assets*	
Revaluation account	*B103*	*Changes in the value of net worth due to nominal holding gains and losses*	

Gross national income (GNI)

2.141 Primary incomes generated in the production activity of resident producer units are distributed mostly to other resident institutional units; however, part of them may go to non-resident units. Symmetrically, some primary incomes generated in the rest of the world may come from resident units. This leads to the definition and measurement of gross national income (GNI). GNI is equal to GDP less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units. In other words, GNI is equal to GDP less taxes (less subsidies) on production and imports, compensation of employees and property income payable to the rest of the world plus the corresponding items receivable from the rest of the world. Thus GNI is the sum of gross primary incomes receivable by resident institutional units or sectors. In contrast to GDP, GNI is not a concept of value added, but a concept of income.

2.142 By deducting the consumption of fixed capital from GNI, net national income (NNI) is obtained. The remarks above about the conceptual relevance of the net concept in case of product apply even more strongly to national income.

National disposable income

2.143 Primary incomes receivable by resident institutional units may be used in part to make transfers to non-resident units and resident units may receive transfers originating out of primary incomes in the rest of the world. Gross national disposable income is equal to GNI less current transfers (other than taxes, less subsidies, on production and imports) payable to non-resident units, plus the corresponding transfers receivable by resident units from the rest of the world. Gross national disposable income measures the income available to the nation for final consumption and gross saving. By deducting the consumption of fixed capital from gross national disposal income, net national disposable income is obtained. National disposable income is the sum of disposable income of all resident institutional units or sectors.

Accounts in volume terms

2.144 All the aggregates referred to above are calculated in current values. The influence of changes in prices may also be eliminated. Domestic product is calculated in volume terms in order to measure the real change that occurs from one period to another. This is possible because output, intermediate consumption and taxes, less subsidies, on products can all be calculated in volume terms. On the other hand, aggregates of income may not be expressed in volume terms because income flows may not, strictly speaking, be broken down into a quantity and a price component. They may, however, be calculated at constant purchasing power, or in real terms. When moving from domestic product in volume terms to national income in real terms, the effect of changes in the terms of trade between the total economy and the rest of the world must be taken into account. The necessary adjustment is described in chapter 15.

4. The other parts of the accounting structure

The central supply and use table and other input-output tables

2.145 The detailed analysis of production by industries and flows of goods and services by kind of products is an integral part of the integrated central framework. It would be feasible to include certain details in the integrated economic accounts table; for example, the rows for output, intermediate consumption and value added might be subdivided by kind of economic activity; the columns for goods and services might be subdivided by type of products. However, the System does not adopt this solution, because the table would become cumbersome. Instead, tables that provide a systematic cross-classification by institutional sectors and industries of output, intermediate consumption, and value added and its components are proposed. They are described in detail in chapters 14 and 28 but the main features are outlined here.

2.146 The production and generation of income accounts in the integrated economic accounts are given only by institutional sectors and with a global balance of transactions on goods and services. The detailed analysis of production activities and goods and services balances is made in the supply and use tables presenting:

a. The resources and uses of goods and services for each type of product;

b. The production and generation of income accounts for each industry according to kind of economic activity;

c. Data on factors of production (labour and fixed capital) used by industries are also provided.

The tables of financial transactions and financial assets and liabilities

2.147 The integrated economic accounts show which sectors acquire which financial assets and incur which liabilities. In order to examine the working of the financial sector, the first expansion of the financial account is to distinguish nine sub-sectors within financial corporations and eight categories of financial assets and liabilities. The sub-sectors of financial institutions are discussed in chapter 4 and the details of the financial instruments is described in chapter 11.

2.148 However, as explained in the introduction to this chapter, the presentation of the financial account as described in this chapter even with the elaboration of sub-sectors and financial instruments described in chapters 4 and 11, is still not fully articulated. It shows which sectors and sub-sectors incur loans and make deposits but it does not allow an in-depth examination of the intermediation process whereby a financial institution draws in funds, repackages them and issues them as other instruments to other units. In order to explore this, a three-dimensional "from-whom-to-whom" style of presentation is needed. This is sometimes referred to as a flow of funds matrix. The three-dimensional table of financial transactions is usually presented as a series of matrices, one

matrix for each kind of financial instrument showing the flows from one sector to another.

2.149 As such a presentation is not necessarily useful for actually presenting the data, other presentations may be preferred in practice for publication. For example, a detailed classification of financial instruments combined with a sector classification may be cross-classified with the sector classification, once to show changes in the debtor positions of the debtor sectors and then again to show changes in the creditor positions of the creditor sectors. As compared to the presentation of the financial accounts made in the integrated economic accounts, this means, in short, introducing a sector distinction below headings of financial instruments when relevant (for a more complete explanation see chapter 27).

Complete balance sheets and assets and liabilities accounts

2.150 In the integrated economic accounts, balance sheets are presented in a very aggregated way. For each sector or sub-sector more complete balance sheets may be built up using the detailed classification of assets and liabilities when appropriate. Changes in assets and liabilities for each sector may also be analysed for each type of asset and liability and each source of change.

2.151 In addition, three-dimensional tables may be elaborated showing the "from-whom-to-whom" links for each type of financial instrument, to permit better analysis. The presentation of such tables is exactly the same as for tables of financial transactions except that the stock of assets or liabilities is shown instead of changes in assets or liabilities and the net financial position of each sector appears instead of its net lending or borrowing. These tables follows closely the principles for the similar flow tables and are also described in chapter 27.

Functional analysis

2.152 As explained in section B, the description of a transaction explains what type of flow is being recorded but it does not explain why the transaction is being entered into. In order to analyse the purpose of transactions, it is necessary to apply a functional classification to the basic transaction. For example, instead of disaggregating household consumption by type of product, it may be disaggregated to show how much is spent on food, housing, health, recreation and so on. For government consumption a distinction may be made between consumption related to law and order, defence , health or education, for instance. As compatible but different classifications are used according to the sector concerned, these partial analyses by purpose cannot be integrated in a single table and, in most cases, no exhaustive total for the total economy can be calculated in the central framework.

2.153 Another way of looking at function may be to identify all expenditure related to a particular functional activity, such as, for example, environmental protection. This is not (yet) an area where all relevant expenditures are easily identified and so it may be desirable to develop this further outside the central framework in a satellite account.

Population and labour inputs tables

2.154 A dimension is added to the usefulness of a number of national accounts aggregates by calculating these figures per head. For broad aggregates such as GDP, GNI or household final consumption, the denominator commonly used is the total (resident) population. When sub-sectoring the accounts or part of the accounts of the household sector, data on the number of households and the number of persons in each sub-sector are also necessary.

2.155 In productivity studies, data on the labour inputs used by each industry in the process of production are indispensable. Total hours worked is the preferred measure of labour inputs for the System. Inferior alternatives are full-time equivalent jobs, the number of jobs or the number of persons employed.

2.156 Data on population and labour inputs must generally be adjusted in order to be consistent with the System's concepts, definitions and classifications. The resulting tables are an integral part of the System and are explained in chapter 19.

E. The integrated central framework and flexibility

1. Applying the central framework in a flexible way

2.157 The central framework of the System is consistent in terms of its concepts and its accounting structure. Links between the various elements of the integrated System have been illustrated in order to depict its structure in a simple but complete way. That presentation does not imply any order of priority or frequency (quarterly, annually, etc.) for implementing national accounts. Priorities in compiling national accounts are a matter of statistical policy; no universal recommendation can be made. (However, some indications relevant to specific circumstances are provided in relevant handbooks.) Similarly, the accounting structure does not imply that results always have to be presented exactly as they stand in this or other chapters. A country may choose to publish mainly time series, to prepare only some accounts or aggregates, etc.

2.158 In general, the System has to be looked at in a consistent but flexible way. According to analytical requirements and data availability, the attention paid to various aspects of the central framework may vary. In general, greater emphasis may be given to one part rather than another by choosing the level of disaggregation to adopt for classifications of institutional sectors, industries, products, transactions (including the complementary classification), sequence of accounts, etc., by using different methods of valuation; by using different priorities for various parts of the accounts and different

frequencies; by rearranging the results; by introducing some additional elements, etc.

2.159 The household sector provides a good illustration of what may be done in order to provide an in-depth analysis of the household conditions and the functioning of the economy as a whole. A detailed approach to the household sector may be undertaken, first of all, by deconsolidating the household sector beyond the sub-sectors included in the main classification of the System, distinguishing, for instance, the type of economic activity carried out (formal or informal), the location of the household (urban or rural) or the level of skill. Secondly, it is possible to adapt the way household activities are portrayed in the sequence of accounts. For instance, a concept of discretionary income may be used by excluding from disposable income those elements which are provided in kind and for which the household has no choice on how to spend this part of income, or the classification of household transactions may be complemented, to show the industry of origin of various types of income, and so on.

2.160 The flexibility of the System is further illustrated with the public sector, whose components are systematically shown at various levels of detail in the classification of institutional sectors. The components of the public sector may be re-arranged to group the accounts of the overall public sector. These accounts may be shown before consolidation and after consolidation to describe the relations between the public sector and the private sector and between the public sector and the rest of the world (by separating out the external transactions of the public sector).

2.161 Chapters 21-29 provide more detailed analyses of the above examples. They also present illustrations of the flexible uses of the central framework in the field of key sector accounting, external accounts problems and the informal economy.

2. Introducing social accounting matrices

2.162 A social accounting matrix (SAM) is a presentation of the System in matrix terms that permits the incorporation of extra details of special interest. To date, builders of SAMs have exploited the flexibility to highlight special interests and concerns such as disaggregating the household sector, showing the link between income generation and consumption, etc. The power of a SAM, as well as of the System, comes from choosing the appropriate type of disaggregation to study the topic of interest. In addition to a flexible application and the inclusion of various complements, SAMs may incorporate more extensive adjustments, which are of a satellite accounting nature, in order to serve specific analytical purposes. For further explanation of the matrix presentation and SAMs, see chapters 28 and 29

3. Introducing satellite accounts

2.163 In some cases, working with the central framework, even in a flexible way, is not sufficient. Even when conceptually consistent, the central framework may become overburdened with details. Moreover, some requirements may conflict with the concepts and architecture of the central framework.

2.164 In certain types of analysis, the basic intention is not to use alternative economic concepts, but simply to focus on a certain field or aspect of economic and social behaviour in the context of national accounts. The intent is to make apparent and to describe in more depth aspects that are hidden in the accounts of the central framework or surface only to a limited extent. Tourism is a good example. Various aspects of producing and consuming activities connected with tourism may appear in detailed classifications of activities, products and purposes. However, transactions and purposes specific to tourism appear separately in only a few cases. In order to describe and measure tourism in a national accounts framework, it is necessary to make a choice between two approaches: either subdivide many elements in the accounts of the central framework to get the required figures for tourism and pay the price of overburdening and unbalancing the various components of the accounts, or elaborate a specific framework for tourism. The latter approach also allows adaptation of the various classifications and measurement of additional aggregates, such as national expenditure on tourism, which may cover intermediate as well as final consumption.

2.165 In other types of analysis, more emphasis is given to alternative concepts. For instance, the production boundary may be changed, generally by enlarging it, for example, the production of domestic services by members of the household for their own final consumption may be brought within the production boundary. The concept of fixed assets and the related fixed capital formation may be broadened, by covering consumer durables or human capital. It is also possible in environmental accounting to record the relationships between natural assets and economic activities differently by recording the depletion of subsoil or other natural resources and the degradation of natural assets. In these approaches, the economic process itself is depicted differently and complementary or alternative aggregates are calculated. The analysis of a number of important fields such as social protection, health or the environment may benefit from building a framework to accommodate elements which are included in the central accounts, explicitly or implicitly, plus complementary elements (either monetary or in physical quantities) and possibly alternative concepts and presentations. In all cases, however, the links with the central framework are made explicit, there are a number of common elements and any contradictory features are introduced, not by chance, but after explicitly considering various ways of looking at reality.

2.166 Those special constructs, which are consistent with but not fully integrated the central framework, are called satellite accounts and are described in more detail in chapter 29.