X THE CAPITAL ACCOUNT

A. Introduction to Capital account

10.2 The assets recorded in the balance sheets of the System are economic assets. These are defined as entities:

(a) Over which ownership rights are enforced by institutional units, individually or collectively; and

(b) From which economic benefits may be derived by their owners by holding them, or using them, over a period of time.

10.3 Every economic asset must function as a store of value that depends upon the amounts of the economic benefits that its owner can derive by holding it or using it. However, this value does not usually remain constant as the benefits remaining often diminish with the passage of time. Different kinds of benefits may be derived from different kinds of assets, as follows:

(a) Some benefits are derived by using assets such as buildings or machinery in production;

(b) Some benefits consist of property incomes: for example, interest, dividends, rents, etc., received by the owners of financial assets and land;

(c) Finally, assets act as stores of value that may be realized by disposing of them or terminating them. While some assets may be held until the benefits derivable from them are exhausted, others may be disposed of before that point in order to realize the capitalized values of the benefits still remaining. Some assets may be held purely as stores of values (precious metals or stones, etc.) without any other benefits being derived from them.

10.20 The purpose of the capital account, shown in table 10.1, is to record the values of the non-financial assets that are acquired, or disposed of, by resident institutional units by engaging in transactions and to show the change in net worth due to saving and capital transfers. The transactions may be either with other institutional units, both resident and non-resident, or internal transactions in which units retain for their own use assets that they have produced themselves. The account does not, however, cover changes in the volume of non-financial assets owned by units that do not result from transactions, these being recorded in the other changes in volume of assets account described below in chapter XII.

Table 10.1. Account III.1: Capital account

10.21 As already explained in the general introduction to the accumulation accounts and balance sheets, the capital account is the first of four accounts dealing with changes in the values of assets held by institutional units. These four accounts enable the change in the net worth of an institutional unit or sector between the beginning and end of the accounting period to be decomposed into its constituent elements by recording all changes in the prices and volumes of assets held, whether resulting from transactions or not.

10.22 When compiling balance sheets, it is customary to record assets on the left side and liabilities and net worth on the right. The same convention is followed in the accumulation accounts, where changes in assets are recorded on the left and other items on the right. As in the current accounts, the balancing item of the capital account, i.e., net lending or borrowing, is recorded on the left side. Consumption of fixed capital is also recorded on the left side of the capital account.

10.23 The right side of the capital account records the resources available for the accumulation of assets. These consist of net saving, the balancing item carried forward from the use of income account, and capital transfers. Capital transfers payable are recorded with a negative sign.

10.6 Two different categories of non-financial assets need to be distinguished from each other: produced and non-produced assets.

. Produced assets are defined as non-financial assets that have come into existence as outputs from processes that fall within the production boundary of the System as defined in chapter VI.

.Produced assets Non-financial assets that have come into existence as outputs from production processes. Produced assets consist of fixed assets, inventories and valuables, as defined below.

Non-produced assets are defined as non-financial assets that have come into existence in ways other than through processes of production.

Produced assets

10.7 There are three main types of produced assets: fixed assets, inventories and valuables. Both fixed assets and inventories are assets that are held only by producers for purposes of production.

Fixed assets are defined as produced assets that are themselves used repeatedly, or continuously, in processes of production for more than one year.

Fixed assets Produced assets that are used repeatedly or continuously in production processes for more than one year. Fixed assets consist of tangible and intangible fixed assets, as defined below.

The distinguishing feature of a fixed asset is not that it is durable in some physical sense, but that it may be used repeatedly or continuously in production over a long period of time that is taken to be more than one year. Some goods, such as coal, may be highly durable physically but cannot be fixed assets because they can be used once only. Fixed assets include not only structures, machinery and equipment but also cultivated assets such as trees or animals that are used repeatedly or continuously to produce other products such as fruit or dairy products. They also include intangible assets such as software or artistic originals used in production.

Inventories (AN.12)

Produced assets that consist of goods and services that came into existence in the current period or in an earlier period held for sale, use in production or other use at a later date. They consist of materials and supplies, work-in-progress, finished goods and goods for resale, as defined below.

Included are all inventories held by government, including, but not limited to, inventories of strategic materials, grains and other commodities of special importance to the nation.

Inventories consist of:

(a) Stocks of outputs that are still held by the units that produced them prior to their being further processed, sold, delivered to other units or used in other ways; and

(b) Stocks of products acquired from other units that are intended to be used for intermediate consumption or for resale without further processing.

Valuables (AN.13)

Produced assets that are not used primarily for production or consumption, that are expected to appreciate or at least not to decline in real value, that do not deteriorate over time under normal conditions and that are acquired and held primarily as stores of value. Valuables consist of precious metals and stones, antiques and other art objects and other valuables, as defined below.

Valuables are defined as goods of considerable value that are not used primarily for purposes of production or consumption but are held as stores of value over time.

The economic benefits that valuables bring are that their values are not expected to decline relatively to the general price level. They consist of precious metals and stones, jewellery, works of art, etc.

Non-produced assets

10.8 Non-produced assets consist of assets that are needed for production but have not themselves been produced. They include naturally occurring assets such as land and certain uncultivated forests and deposits of minerals. They also include certain intangible assets such as patented entities.

10.9 Not all environmental assets qualify as economic assets. It is useful, therefore, to delineate those naturally occurring assets that fall within the asset boundary of the System from those that do not.

1. Changes in non-financial assets

10.24 The left side of the capital account records the values of the non-financial assets acquired, or disposed of, in transactions of various kinds. The assets may be bought or sold, or acquired or disposed of as a result of capital transfers in kind, barter or production for own use. Values must be estimated for assets that are not bought or sold.

10.25 Five categories of changes in assets are distinguished in the capital account:

(a) Gross fixed capital formation;

(b) Consumption of fixed capital;

(c) Changes in inventories;

(d) Acquisitions less disposals of valuables;

(e) Acquisitions less disposals of non-produced non-financial assets.

The treatment given to each of these categories of changes in assets is described in later sections of this chapter. The annex to chapter XIII defines and describes the assets.

10.26 The gross fixed capital formation of an institutional unit or sector is measured largely by the value of its acquisitions less disposals of new or existing fixed assets. Disposals do not include consumption of fixed capital. Fixed assets consist of tangible or intangible assets that have come into existence as outputs from processes of production and that are themselves used repeatedly or continuously in other processes of production over periods of time of more than one year. Changes in assets may be either positive or negative, and it is possible for the gross fixed capital formation of an individual institutional unit or sector to be negative if it sells off, or transfers, enough of its existing fixed assets to other units or sectors.

10.27 Consumption of fixed capital is also recorded as a change in assets on the left side of the capital account. This implies that the saving figure carried forward from the use of income account and recorded on the right side of the account should be net saving. Consumption of fixed capital represents the reduction in the value of the fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or normal accidental damage. It may be deducted from gross fixed capital formation to obtain net fixed capital formation, although net fixed capital formation is not shown as a separate item in the capital account. If it is not feasible to measure consumption of fixed capital because of lack of data, the saving figure carried forward from the use of income account has to be gross, while fixed capital formation can also only be recorded gross. If consumption of fixed capital has to be omitted from both sides of the account for this reason, the balancing item of the account is not affected, of course; net lending or borrowing can be derived residually whether or not consumption of fixed capital can be estimated. However, if consumption of fixed capital is not estimated, the accumulation accounts do not record all changes between two successive balance sheets.

10.28 The remaining items on the left side of the capital account refer to inventories, valuables and non-produced non-financial assets. Changes in inventories, including work-in-progress, are measured by the value of the entries into inventories less the value of withdrawals and the value of any recurrent losses of goods held in inventories. Products entering and leaving inventories are implicitly treated as if they were sold to, or purchased from, inventories and are valued at the same prices as actual sales or purchases taking place at the same time. The total value of the changes in inventories for an institutional unit or sector may equally well be positive or negative. The total value of the changes - acquisitions less disposals - in the other two items, valuables and non-produced non-financial assets, may also, of course, be positive or negative.

2. Saving and capital transfers

10.29 The items recorded on the right side of the capital account consist of net saving and capital transfers receivable and payable, capital transfers payable being recorded with a negative sign. Capital transfers are transactions in which the ownership of an asset (other than cash and inventories) is transferred from one institutional unit to another, in which cash is transferred to enable the recipient to acquire another asset or in which the funds realized by the disposal of another asset are transferred. The total of the resources, on the right side of the account, is explicitly shown and described as changes in net worth due to saving and net capital transfers. It is not a balancing item. It represents the positive or negative amount available to the unitor sector for the acquisition of non-financial and financial assets.

3. Net lending or borrowing (B.9)

10.30 The balancing item of the capital account, described as net lending or borrowing, is defined as follows:

(a) Net saving plus capital transfers receivable minus capital transfers payable;

minus

(b) The value of acquisitions less disposals of non-financial assets, less consumption of fixed capital.

When positive, net saving represents that part of disposable income that is not spent on consumption goods and services and must, therefore, be used to acquire non-financial or financial assets of one kind or another, including cash, or to repay liabilities. When negative, net saving measures the amount by which final consumption expenditure exceeds disposable income: the excess must be financed by disposing of assets or incurring new liabilities (in both cases, the adjustment for the change in the net equity of households on pension funds has to be added to disposable income before calculating net saving in order to ensure that pension contributions and receipts are treated as acquisitions and disposals of financial assets: see the introduction to chapter IX). Similarly, capital transfers receivable, whether in cash or kind, are intended to enable the recipient to acquire assets or repay liabilities, while capital transfers payable imply that assets are disposed of. Thus, the balancing item in the capital account, being the difference between changes in net worth due to saving and capital transfers and net acquisitions of non-financial assets, shows the amount of the resources remaining for purposes of lending or that need to be borrowed.

10.31 The identity between the balancing items of the capital account and the financial account is an important feature of the set of the accounts as a whole. This feature stems mainly from the fact that monetary transactions require simultaneous entries in the financial accounts of the two units concerned and in one or other of their current and capital accounts. The conceptual identity between the balancing items provides a check on the numerical consistency of the set of accounts as a whole, although the two balancing items are likely to diverge significantly in practice because of errors of measurement.

B. Gross capital formation (P.5)

10.32 Gross capital formation is measured by the total value of the gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables.

1. Gross fixed capital formation (P.51)

Producers' durables excluded from gross fixed capital formation

10.63 As already mentioned in chapter VI, when describing intermediate consumption, there are two kinds of durable goods used by producers that are excluded from gross fixed capital formation, i.e., small tools and some kinds of military equipment.

Small tools

10.64 Some goods may be used repeatedly, or continuously, in production over many years but may nevertheless be small, inexpensive and used to perform relatively simply operations. Hand tools such as saws, spades, knives, axes, hammers, screwdrivers and spanners or wrenches are examples. If expenditures on such tools take place at a fairly steady rate and if their value is small compared with expenditures on more complex machinery and equipment, it may be appropriate to treat the tools as materials or supplies used for intermediate consumption. Some flexibility is needed, however, depending on the relative importance of such tools. In countries in which they account for a significant part of the value of the total stock of an industry's durable producers' goods, they may be treated as fixed assets and their acquisition and disposal by producers recorded under gross fixed capital formation.

Existing assets

Existing fixed asset — An existing fixed asset is one that has already been acquired by at least one resident user, or produced on own account, and whose value has, therefore, already been included in the gross fixed capital formation of at least one user at some earlier point in time in the current or some previous accounting period. 10.39

10.39 Because assets have service lives that may range up to 50 years or more for dwellings or other structures, their ownership may change several times before they are eventually scrapped, demolished or abandoned. A good becomes an existing good as soon as its ownership passes from its original producer or importer, to a resident unit that uses it, or intends to use it. Thus, an existing fixed asset is one that has already been acquired by at least one user, or produced on own account, and whose value has, therefore, already been included in the gross fixed capital formation of at least one user at some earlier point in time in the current or some previous accounting period. In many countries, well-organized markets exist to facilitate the buying and selling of many kinds of existing fixed assets, notably automobiles, ships, aircraft, dwellings and other structures. Indeed, the number of existing dwellings bought and sold within a given time period may considerably exceed the number of new dwellings. In practice, most existing fixed assets will have been used in production by their current owners, but an existing capital good might be sold by its owner before it has actually been used.

10.40 In general, sales or other disposals of existing goods, whether fixed assets or not, are recorded as negative expenditures or negative acquisitions. Thus, when the ownership of an existing fixed asset is transferred from one resident producer to another, the value of the asset sold, bartered or transferred is recorded as negative gross fixed capital formation by the former and as positive gross fixed capital formation by the latter. The value of the positive gross fixed capital formation recorded for the purchaser exceeds the value of the negative gross fixed capital formation recorded for the seller by the total value of the costs of ownership transfer incurred by both parties to the transaction. The treatment of these costs is explained in more detail in a later section.

10.41 When the sale takes place between two resident producers, the positive and negative values recorded for gross fixed capital formation cancel out for the economy as a whole except for the costs of ownership transfer. Similarly, if an existing immovable fixed asset, such as a building, is sold to a non-resident, by convention the latter is treated as purchasing a financial asset that is the equity of a notional resident unit while the notional resident unit is deemed to purchase the asset, so that the sale and purchase of the asset takes place between residents. However, if an existing movable fixed asset, such as a ship or aircraft, is exported, no positive gross fixed capital formation is recorded elsewhere in the economy to offset the seller's negative gross fixed capital formation.

10.42 Some durable goods, such as vehicles, may be classified as fixed assets or as consumer durables depending upon the owner and the purpose for which they are used. If, therefore, the ownership of such a good were transferred from an enterprise to a household to be used for final consumption, negative gross fixed capital formation is recorded for the enterprise and positive consumption expenditure by the household. If a vehicle owned by a household were to be acquired by an enterprise, it would be recorded as an acquisition of a "new" fixed asset even though it is an existing good. A similar treatment is applied to imports of used assets acquired by resident producers.

10.43 Thus, it is perfectly possible for the gross fixed capital formation of individual institutional units to be negative as a result of the sale or disposal of existing fixed assets, although aggregate gross fixed capital formation is unlikely to be negative for large groups of units - sub-sectors, sectors or the economy as a whole.

Tangible fixed assets under financial leases

10.44 A financial lease is a contract between lessor and lessee whereby the lessor purchases the good and the lessee pays rentals which enable the lessor, over the period of the contract, to cover all, or virtually all, costs including interest. Financial leases may be distinguished by the fact that all the risks and rewards of ownership are, de facto, transferred from the legal owner of the good, the lessor, to the user of the good, the lessee. In order to capture the economic reality of such arrangements, the goods under a financial lease are treated in the System as if they were purchased by the user, that is, as if a change in ownership had occurred. For tangible fixed assets - in practice, mostly machinery and equipment - the purchase appears in the capital account of the user/owner.

Major improvements to existing assets

10.45 Gross fixed capital formation may take the form of improvements to existing fixed assets, such as buildings or computer software, or tangible non-produced assets, such as land, that increase their productive capacity, extend their service lives, or both. By definition, such gross fixed capital formation does not lead to the creation of new assets that can be separately identified and valued.

Improvements to fixed assets

10.46 The distinction between ordinary maintenance and repairs and improvements to existing fixed assets is not clear cut. Ordinary maintenance and repairs constitute intermediate consumption.

10.47 As explained in paragraphs 6.166 to 6.169 of chapter VI, ordinary maintenance and repairs are distinguished by two features:

(a) They are activities that must be undertaken regularly in order to maintain a fixed asset in working order over its expected service life. The owner or user of the asset has no choice about whether or not to undertake ordinary maintenance and repairs if the asset in question is to continue to be used in production;

(b) Ordinary maintenance and repairs do not change the fixed asset’s performance, capacity or expected service life. They simply maintain it in good working order, if necessary by replacing defective parts by new parts of the same kind.

10.48 On the other hand, improvements to existing fixed assets that constitute gross fixed formation must go well beyond the requirements of ordinary maintenance and repairs. They must bring about significant changes in some of the characteristics of existing fixed assets. They may be distinguished by the following features:

(a) The decision to renovate, reconstruct or enlarge a fixed asset is a deliberate investment decision that may be taken any time, even when the good in question is in good working order and not in need of repair. Major renovations of ships, buildings or other structures are frequently undertaken well before the end of their normal service lives;

(b) Major renovations, reconstructions or enlargements increase the performance or productive capacity of existing fixed assets or significantly extend their previously expected service lives, or both. Enlarging or extending an existing building or structure constitutes a major change in this sense, as does the refitting or restructuring of the interior of a building or ship or a major extension to or enhancement of an existing software system.

10.49 It is difficult to provide simple objective criteria that enable improvements to be distinguished from repairs because any repair may be said to improve the performance or extend the working life of the unrepaired asset. For example, machines may cease to function at all because of the failure of one small part, especially equipment with electric circuits. The replacement of such a part does not, however, constitute gross fixed capital formation. Thus, improvements have to be identified either by the magnitude of the changes in the characteristics of the fixed assets - that is, by major changes in their size, shape, performance, capacity, or expected service lives - or by the fact that improvements are not the kinds of changes that are observed to take place routinely in other fixed assets of the same kind, as part of ordinary maintenance and repair programmes.

10.50 Gross fixed capital formation in the form of improvements to existing fixed assets is to be classified with acquisitions of new fixed assets of the same kind. Accordingly, it is the improved asset that is henceforth relevant to the System and on which consumption of fixed capital must be calculated subsequently. However, it may also be useful for some analytical purposes to record improvements separately so that they may also be grouped with the improvements considered in the following section, if needed.

Improvements to tangible non-produced assets

10.51 In practice, these consist of improvements to land. Acquisitions that lead to major improvements in the quantity, quality or productivity of land, or prevent its deterioration, are treated as gross fixed capital formation. They consist of acquisitions related to the following kinds of activities:

(a) Reclamation of land from the sea by the construction of dykes, sea walls or dams for this purpose;

(b) Clearance of forests, rocks, etc. to enable land to be used in production for the first time;

(c) Draining of marshes or the irrigation of deserts by the construction of dykes, ditches or irrigation channels;

(d) Prevention of flooding or erosion by the sea or rivers by the construction of breakwaters, sea walls or flood barriers.

10.52 These activities may lead to the creation of substantial new structures such as sea walls, flood barriers, dams, etc., but these are not themselves used directly to produce other goods and services in the way that most structures are. Their construction is undertaken to obtain more or better land, and it is the land, a non-produced asset, that is needed for production. For example, a dam built to produce electricity serves quite a different purpose from a dam built to keep out the sea, and it is useful to classify them separately.

10.53 Acquisitions of tunnels and other structures associated with the mining of mineral deposits, etc., are classified as gross fixed capital formation in structures and not as improvements to land. These activities lead to the creation of assets that are used separately from the land through which they are drilled or bored. Site clearance and preparation for purposes of construction - i.e., the clearance of land previously used in production - is also not classified as improvements to land but treated as an integral part of the gross fixed capital formation in buildings or other structures.

10.54 Acquisitions or disposals of land itself are recorded as purchases or sales of non-produced assets and not as gross fixed capital formation. Thus, improvements to land must be shown on their own in a classification of gross fixed capital formation. The decline, between the beginning and the end of the accounting period, in the value of the improvement to land is shown, by convention, in consumption of fixed capital. This treatment is a convention in that, as noted above, an improvement does not lead to the creation of a new fixed asset that can be separately identified and valued, but it is consistent with the need to write down the value of all gross fixed capital formation over time as a result of consumption of fixed capital.

Costs of ownership transfer

Fixed assets

10.55 Acquisitions of new assets are valued at actual or estimated purchasers' prices plus the associated costs of ownership transfer incurred by units acquiring the assets. Similarly, acquisitions of existing assets are valued at the actual or estimated prices payable to their previous owners plus the associated costs of ownership transfer incurred by the units acquiring the assets. The costs of ownership transfer consist of the following kinds of items:

(a) All professional charges or commissions incurred by the unit acquiring the asset - fees paid to lawyers, architects, surveyors, engineers, valuers, etc., and commissions paid to estate agents, auctioneers, etc.;

(b) All taxes payable by the unit acquiring the asset on the transfer of ownership of the asset.

Costs of ownership transfer incurred by the unit acquiring the asset are treated as an integral part of the value of that unit's gross fixed capital formation. The value at which the asset enters the balance sheet of its new owner therefore includes the costs of ownership transfer.

10.56 Consistently with this method of valuation, disposals of existing fixed assets are valued at the prices payable by the units acquiring the assets to the units disposing of the assets minus any associated costs of ownership transfer incurred by the latter. Such costs are similar to those listed above, for example, lawyers' fees, estate agents' fees or commissions, auctioneers' commissions, taxes, etc. Taxes on ownership transfer do not, however, include capital gains taxes payable by the units disposing of the assets.

10.57 When a fixed asset is produced and sold for the first time, the costs of ownership transfer incurred by the first owner are included as an integral part of the value of the gross fixed capital formation recorded at the time. They are therefore gradually written off as part of the consumption of fixed capital charged on the use of the asset over its service life. If an asset is sold, however, before the end of its service life, this process is interrupted and a second set of costs of ownership transfer are incurred by both the first and the second owner. The value of the positive gross fixed capital formation recorded for the second owner is equal to the price paid by the second owner to the first owner plus the transfer costs incurred by the second owner. On the other hand, the value of the negative gross fixed capital formation recorded for the first owner is equal to the price paid by the second owner to the first owner minus the transfer costs incurred by the first owner. The positive gross fixed capital formation undertaken by the second owner must, therefore, exceed the negative gross fixed capital formation recorded for the second owner by the value of the costs of ownership transfer incurred by both units. This amount measures the total value of the gross fixed capital formation undertaken by the two units together.

10.58 Because of costs of ownership transfer, the value at which the disposal of an asset is recorded for the first owner may be less than the value of the asset in the opening balance sheet or at which it entered the balance sheet if acquired within the same period. In this case, a nominal holding loss equal to the difference between the two values is recorded for the first owner. Holding losses are incurred when owners of existing assets are unable to recover the costs of ownership transfer incurred on both the initial purchase and subsequent sale of an asset, although it may be difficult to separate such losses from other holding gains or losses when the prices of existing assets are changing for other reasons. The treatment of costs of ownership transfer is explained in more detail in the annex to this chapter where it is shown that, other things being equal, that part of the transfer costs incurred by the first owner on the initial acquisition of the asset that have not already been written off as consumption of fixed capital by the time it is sold plus the transfer costs incurred on the subsequent sale result in a holding loss for the first owner.

Land

10.59 The costs of ownership transfer incurred on purchases and sales of land affect the values recorded in the same way as the costs of ownership transfer on fixed assets described above. However, as land is not a produced asset, it is not possible to have gross fixed capital formation in land itself. The value of the costs of ownership transfer associated with purchases and sales of land must therefore be separated from the purchases and sales themselves. They are recorded under a separate heading in the classification of gross fixed capital formation. Consumption of fixed capital may then be charged using suitably long service lives. However, as land that has been sold disappears from the balance sheet of the seller, any acquisition costs previously incurred by the seller that have not already been written off as consumption of fixed capital together with the selling costs result in a holding loss for the seller.

10.60 All owners and purchasers of land within the economic territory are deemed to have a centre of economic interest in the economy. If an owner or purchaser would not otherwise qualify as a resident unit, a notional resident unit is created for this purpose. The notional resident unit is deemed to purchase the land while the non-resident is deemed to purchase the equity of the notional unit - i.e., to acquire a financial instead of a non-financial asset. Thus, all purchases and sales of land take place between resident units except when the boundaries of the economic territory itself are changed as a result of the purchase or sale - for example, when a foreign government, or international organization, purchases or sells land that is added to, or taken away from, the enclave in which its embassy or offices are located. Moreover, as purchases and sales of land between residents are also recorded excluding costs of ownership transfer for both buyers and sellers, the total value of the purchases and sales of land between residents must be equal to each other at the level of the total economy, although not at the level of individual sectors or sub-sectors.

Other non-produced assets

10.61 The costs of ownership transfer incurred on purchases and sales of these assets, which include, for example, mineral deposits that are used in production, are treated in the same way as land, being recorded under the same heading of the classification of gross fixed capital formation.

10.35 The various components of acquisitions and disposals of fixed assets, as referred to in categories (a) and (b) above, are listed below:

(a) Value of fixed assets purchased;

(b) Value of fixed assets acquired through barter;

(c) Value of fixed assets received as capital transfers in kind;

(d) Value of fixed assets retained by their producers for their own use, including the value of any fixed assets being produced on own account that are not yet completed or fully mature;

less

(e) Value of existing fixed assets sold;(f) Value of existing fixed assets surrendered in barter;

(g) Value of existing fixed assets surrendered as capital transfers in kind.

The value of the acquisitions less disposals of fixed assets of a producer is given by the sum of (a) to (d) less the sum of (e) to (g). The components of acquisitions each may refer to new or existing fixed assets, the latter being defined in paragraph 10.39 in the next section below. Acquisition of new assets covers not only complete assets but also any renovations, reconstruction or enlargements that significantly increase the productive capacity or extend the service life of an existing asset. In recognition of the newly increased capacity or newly extended service life, these improvements are treated as part of acquisitions of new assets even though physically they function as part of the existing asset (see paragraphs 10.45 to 10.54 below for a discussion of major improvements). Items (e), (f) and (g) above include disposals of assets that may cease to be used as fixed assets by their new owners: for example, vehicles sold by businesses to households for their personal use or assets that are scrapped or demolished by their new owners.

10.36 The general principles governing the time of recording and valuation of acquisitions less disposals of fixed assets may be summarized as follows. The time at which gross fixed capital formation is recorded is when the ownership of the fixed assets is transferred to the institutional unit that intends to use them in production. Except for assets produced on own account, this time is not generally the same as the time at which the fixed assets are produced. Nor is it necessarily the time at which they are put to use in the production of other goods or services.

10.37 New fixed assets acquired by purchase are valued at purchasers' prices: that is, including not only all transport and installation charges but also all costs incurred in the transfer of ownership in the form of fees paid to surveyors, engineers, architects, lawyers, estate agents, etc., and any taxes payable on the transfer. New fixed assets acquired through barter or transfers in kind are valued similarly at their estimated basic prices plus taxes, transport, installation and other costs of ownership transfer. Fixed assets produced for own gross fixed capital are valued at their estimated basic prices, or by their costs of production when satisfactory estimates of their basic prices cannot be made. Purchases of existing fixed assets are valued including all transport, installation and other costs of ownership transfer incurred by the purchaser while sales of existing fixed assets are valued after deducting any costs of ownership transfer incurred by the seller.

10.38 Not all gross fixed capital formation consists of acquisitions less disposals of fixed assets. Before describing gross fixed capital formation by type of fixed asset it is, therefore, convenient to describe the other components of gross fixed capital formation - i.e., major improvements and costs of ownership transfer - as these may involve any type of asset. It is also useful to define at the outset the term "existing assets" and to describe the treatment of these assets and also the treatment of fixed tangible assets under financial leases.

10.33 Gross fixed capital formation is measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the accounting period plus certain additions to the value of non-produced assets realised by the productive activity of institutional units. Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly or continuously in other processes of production for more than one year.

Time of recording and valuation except for own-account construction

10.73 Many construction projects take a long time to complete. Until such time as the ownership of at least some of the output produced is transferred to the eventual user of the structure, no gross fixed capital formation can take place. Output that is not so transferred and continues to belong to the builder or construction enterprise must be recorded as either work-in-progress or as an addition to inventories of finished goods, depending on whether the construction is finished or not.

10.74 When the construction takes place under a contract of sale agreed in advance, the ownership of the structure is effectively transferred in stages as the work proceeds. The value of the output transferred at each stage under such a contract is recorded as gross fixed capital formation by the purchaser.

10.75 When there is no contract of sale agreed in advance, the output produced by the construction enterprise must be recorded as work-in-progress or as additions to the producers' inventories of finished goods, depending on whether the construction is completed. For example, finished dwellings built speculatively remain as additions to producers' inventories of finished goods until they are sold or otherwise acquired by users.

10.76 Acquisitions of new buildings and structures are valued at their actual or estimated purchasers' prices plus the associated costs of ownership transfer incurred by units acquiring the assets. Similarly, acquisitions of existing buildings and structures are valued at the actual or estimated prices payable to their previous owners plus the associated costs of ownership incurred by the units acquiring the assets. Disposals of existing buildings and structures are valued at the prices payable by the units acquiring the assets to the units disposing of the assets minus the costs of ownership transfer incurred by the latter. For buildings and structures acquired in an incomplete state, a value is estimated based on costs to date, including a mark-up for operating surplus. Stage or progress payments are usually required under a contract of sale agreed in advance, and the amounts paid may often be used to approximate the values of the gross fixed capital formation undertaken by the purchaser at each stage. (If the stage payments are made in advance, or in arrears, of the completion of the relevant work, short-term credits are effectively extended by the purchaser to the construction enterprise, or vice versa, and these credits must be adjusted for in approximating the value of the gross fixed capital formation.) It should be noted that the costs of clearing and preparing the site for construction are part of the costs and are therefore included in the value of the acquisition.

Time of recording and valuation of own-account construction

10.77 When construction is carried out for own use, the producer and the eventual user of the structure are one and the same institutional unit, by definition. No formal transfer of ownership takes place and the unit in its capacity as user of the structure effectively takes possession as the construction proceeds. Thus, the whole of the output of own-account construction during a given accounting period should be recorded as gross fixed capital formation, even if the structure is not finished.

10.78 In principle, the finished structure should be valued at its estimated basic price. If the structure is not completed within a single accounting period, the value of the output and corresponding gross fixed capital formation should be estimated by applying the fraction of the total costs of production incurred during the relevant period to the estimated current basic price. If it is not possible to estimate the basic price of the finished structure, it must be valued by its total costs of production, with a mark-up for operating surplus. If some or all of the labour is provided free, as may happen with communal construction by households, an estimate of what the cost of paid labour would be must be included in the estimated total production costs using wage rates for similar kinds of labour in the vicinity or region. Otherwise, the value of the finished structure will be seriously underestimated.

10.79 Certain structures may be produced for own communal use by groups of households: for example, buildings, roads, bridges, etc. After they are finished, the ownership of such structures may then be transferred to some government unit that assumes responsibility for their maintenance. When the transfer occurs, the gross fixed capital formation on own account originally attributed to the group of households is cancelled by their negative gross fixed capital formation resulting from the capital transfer in kind they make to the government unit. The final gross fixed capital formation remaining is that of the government unit resulting from its acquisition of the asset through the capital transfer in kind.

10.34 There is substantial diversity in the different types of gross fixed capital formation that may take place. The following main types may be distinguished:

(a) Acquisitions, less disposals, of new or existing tangible fixed assets, subdivided by type of asset into:

(i) Dwellings;

(ii) Other buildings and structures;

(iii) Machinery and equipment;

(iv) Cultivated assets - trees and livestock - that are used repeatedly or continuously to produce products such as fruit, rubber, milk, etc.;

(b) Acquisitions, less disposals, of new and existing intangible fixed assets, sub-divided by type of asset into:

(i) Mineral exploration;

(ii) Computer software;

(iii) Entertainment, literary or artistic originals;

(iv) Other intangible fixed assets;

(c) Major improvements to tangible non-produced assets, including land;

(d) Costs associated with the transfers of ownership of non-produced assets.

Acquisitions less disposals of tangible fixed assets (P.511)

10.62 Acquisitions less disposals of tangible fixed assets usually constitute by far the largest component of gross fixed capital formation, at least at the level of the total economy. The tangible fixed assets included under the general headings of structures, machinery and equipment and cultivated assets are defined and described in the annex to chapter XIII, so that there is no need to repeat such a description here. Also, the fact that the major improvements to tangible fixed assets are classified with acquisitions of new assets is not repeated for each of the various kinds of fixed assets. The purpose of the present section is different, namely to describe the treatment of certain less well-documented cases, including cultivated assets, borderline cases or exceptions.

Military equipment

10.65 Destructive weapons such as missiles, rockets, bombs, etc., cannot be treated as fixed assets, because they are not in fact used repeatedly or continuously in production. Although durable, they are single-use goods. Moreover, the actual use of such weapons in combat to destroy lives or property cannot be construed as the production of goods or services. By extension, vehicles and equipment such as warships, submarines, military aircraft, tanks, missile carriers and launchers, etc., whose function is to release such weapons should also not be treated as fixed assets.

10.66 On the other hand, most of the structures used by military establishments - such as airfields, docks, roads and hospitals - are not only used continuously and repeatedly in production, but are used in much the same way as similar structures utilized by civilian producers. Such structures are often switched from military to civilian use, or vice versa. There is no justification for not treating them as fixed assets.

10.67 Thus, whereas structures such as military hospitals, and the equipment contained therein, are fixed assets, weapons and their supporting systems are not. It may sometimes be difficult to determine where to draw the line between the two kinds of goods, and it is also necessary to recognize that it may not always be possible to obtain the necessary data to distinguish different categories of military expenditures. By convention, therefore, all expenditures on durable goods by the military are treated as gross fixed capital formation except for expenditures on weapons and on equipment that can only be used to support and deliver such weapons: warships, submarines, bombers, fighter aircraft, tanks, missile carriers, etc. In practice, almost all structures are likely to be fixed assets and certain types of equipment that have alternative non-military uses - such as transport equipment, computers and communications equipment and hospital equipment - are also treated as fixed assets. If it is not feasible to separate expenditures on such equipment from expenditures on weapons and their support systems, all expenditures on equipment for the military have by default to be treated as intermediate consumption.

10.68 Light weapons and armoured vehicles are also used by non-military establishments engaged in internal security or policing activities. The producers concerned may be either market or non-market, as there are enterprises that provide various kinds of security services commercially in addition to government controlled security or police forces. All the durable producers’ goods used by such services or forces are treated as fixed assets and all their expenditures on fixed assets are counted as gross fixed capital formation notwithstanding the fact that such expenditures might be treated as intermediate consumption if intended for the armed forces. As already noted, many types of durable goods cannot be automatically classified as fixed assets purely on the basis of their physical characteristics.

Dwellings and other buildings and structures

Dwellings	Buildings that are used entirely or primarily as residences, including any associated structures, such as garages, and all permanent fixtures customarily installed in residences. Houseboats, barges, mobile homes and caravans used as principal residences of households are also included, as are historic monuments identified primarily as dwellings. Costs of site clearance and preparation are also included. Examples include products included in Central Product Classification (CPC)a class 5211, residential buildings and CPC group 387, prefabricated buildings, such as one- and two-dwelling buildings and other residential buildings intended for non-transient occupancy. Uncompleted dwellings are included to the extent that the ultimate user is deemed to have taken ownership, either because the construction is on own-account or as evidenced by the existence of a contract of sale/purchase. Dwellings acquired for military personnel are included because they are used, as are dwellings acquired by civilian units, for the production of housing services.
Other buildings and structures	(AN.1112) Non-residential buildings and other structures, as defined below. Uncompleted buildings and structures are included to the extent that the ultimate user is deemed to have taken ownership, either because the construction is for own use or as evidenced by the existence of a contract of sale/purchase. Buildings and structures acquired for military purposes are included to the extent that they resemble civilian buildings acquired for purposes of production and are used in the same way. Non-residential buildings (AN.11121) Buildings other than dwellings, including fixtures, facilities and equipment that are integral parts of the structures and costs of site clearance and preparation. Historic monuments identified primarily as non-residential buildings are also included. Examples include products included in CPC class 5212, non-residential buildings, such as warehouse and industrial buildings, commercial buildings, buildings for public entertainment, hotels, restaurants, educational buildings, health buildings, etc. Other structures (AN.11122) Structures other than buildings, including the cost of the streets, sewers and site clearance and preparation other than for residential or non-residential buildings. Also included are historic monuments for which identification as dwellings or non-residential buildings is not possible and shafts, tunnels and other structures associated with mining subsoil assets. (Major improvements to land, such as dams and dykes for flood control, are included in the value of land.) Examples include products included in CPC group 522, civil engineering works, such as highways, streets, roads, railways and airfield runways;

bridges, elevated highways, tunnels and subways; waterways, harbours, dams and other waterworks; long-distance pipelines, communication and power lines; local pipelines and cables, ancillary works; constructions for mining and manufacture; and constructions for sport and recreation.

10.69 Gross fixed capital formation in buildings, including dwellings, and other structures by producers consists of the value of their acquisitions of new and existing buildings and other structures less the value of their disposals of their existing buildings and structures. All buildings and other structures within the economic territory are deemed, by convention, to be owned by residents. If an owner or purchaser would not otherwise qualify as a resident unit, a notional resident unit is created for the purpose. The notional resident unit is deemed to purchase the building or other structure and the non-resident is deemed to purchase the equity of the notional unit (i.e., acquire a financial asset).

10.70 All dwellings, including houseboats, barges, mobile homes and caravans used as principal residences of households and any associated structures such as garages are fixed assets. Owner-occupiers are treated as the owners of enterprises engaged in the production of housing services for their own final consumption so that dwellings are not consumer durables.

10.71 The construction of new historic monuments constitutes gross fixed capital formation and similarly, major improvements to existing historic monuments are also included in gross fixed capital formation. Historic monuments are identifiable because of particular historic, national, regional, local, religious or symbolic significance. They are usually accessible to the general public, and visitors are often charged for admission to the monuments or their vicinity. Their owners, who may be government units, non-profit institutions (NPIs), corporations or households, typically use historic monuments to produce cultural or entertainment-type services. In principle, the gross fixed capital formation in historic monuments should be included in dwellings, non-residential buildings, and other structures as appropriate; in practice, it may be desirable to classify them with other structures. Consumption of fixed capital on new monuments, or on major improvements to existing monuments, should be calculated on the assumption of appropriately long service lives.

Consumption of fixed capital on buildings and other structures

10.72 All buildings and other structures are assumed to have finite service lives, even when properly maintained, so that consumption of fixed capital is calculated for all such fixed assets, including railways, roads, bridges, tunnels, airports, harbours, pipelines, dams, etc. Service lives are not determined purely by physical durability, and many buildings and structures are eventually scrapped because they have become obsolete. However, the service lives for some structures such as certain roads, bridges, dams, etc., may be very long - perhaps a century or more.

Machinery and equipment

Machinery and equipment (AN.1113)

Transport equipment and other machinery and equipment, as defined below other than that acquired by households for final consumption. Tools that are relatively inexpensive and purchased at a relatively steady rate, such as hand tools, may be excluded. Also excluded are machinery and equipment integral to buildings that are included in dwellings and non-residential buildings.

Uncompleted machinery and equipment are excluded, unless produced for own use, because the ultimate user is deemed to take ownership only on delivery of the asset. Machinery and equipment acquired for military purposes are included to the extent that they resemble goods acquired by civilian units for purposes of production and that the military uses in the same way.

Machinery and equipment acquired by households for final consumption are not treated as an asset. They are instead included in the memorandum item “consumer durables” in the balance sheet for households. Houseboats, barges, mobile homes and caravans used by households as principal residences are included in dwellings.

Transport equipment

(AN.11131)

Equipment for moving people and objects. Examples include products other than parts included in CPC division 49, transport equipment, such as motor vehicles, trailers and semitrailers; ships; railway and tramway locomotives and rolling stock; aircraft and spacecraft; and motorcycles, bicycles, etc.

Other machinery and equipment

(AN.11132)

Machinery and equipment not elsewhere classified. Examples include products other than parts included in CPC divisions 43, general purpose machinery; 44, special purpose machinery; 45, office, accounting and computing equipment, 46, electrical machinery and apparatus, 47, radio, television and communication equipment and apparatus; and 48, medical appliances, precision and optical instruments, watches and clocks. Other examples are products other than parts included in CPC groups 337, fuel elements (cartridges) for nuclear reactors; 381, furniture; 383, musical instruments; 384, sports goods; and 423, steam generators except central heating boilers.

10.80 Gross fixed capital formation in machinery and equipment by producers consists of the value of their acquisitions of new and existing machinery and equipment less the value of their disposals of their existing machinery and equipment. It covers transport equipment and other machinery and equipment, including office equipment, furniture, etc. As explained above, machinery and equipment under financial lease is treated as acquired by the user (lessee) (rather than as acquired by the lessor).

10.81 Gross fixed capital formation is not recorded until the ownership of the fixed assets is transferred to the unit that intends to use them in production. Thus, new machinery and equipment that has not yet been sold forms part of additions to inventories of finished goods held by the producers of the assets. Similarly, imported machinery and equipment is not recorded as gross fixed capital formation until it is acquired by the unit that intends to use it.

10.82 Machinery and equipment such as vehicles, furniture, kitchen equipment, computers, communications equipment, etc. that are acquired by households for purposes of final consumption are not fixed assets and their acquisition is not treated as gross fixed capital formation. However, houseboats, barges, mobile homes and caravans that are used as the principal residences of households are treated as dwellings, so that their acquisition by households is included in gross fixed capital formation.

Cultivated assets

Cultivated assets (AN.1114)

Livestock for breeding, dairy, draught, etc. and vineyards, orchards and other plantations of trees yielding repeat products that are under the direct control, responsibility and management of institutional units, as defined below.

Immature cultivated assets are excluded unless produced for own use.

Livestock for breeding, dairy, draught, etc.

(AN.11141)

Livestock that are cultivated for the products they provide year after year. They include breeding stocks (including fish and poultry), dairy cattle, draft animals, sheep or other animals used for wool production and animals used for transportation, racing or entertainment.

Vineyards, orchards and other plantations of trees yielding repeat products

(AN.11142)

Trees (including vines and shrubs) cultivated for products they yield year after year, including those cultivated for fruits and nuts, for sap and resin and for bark and leaf products.

10.83 Cultivated assets consist of livestock or trees that are used repeatedly or continuously over periods of time of more than one year to produce other goods or services. Thus, livestock that continue to be used in production year after year are fixed assets. They include, for example, breeding stock, dairy cattle, sheep reared for wool and draught animals. On the other hand, animals raised for slaughter, including poultry, are not fixed assets. Similarly, trees (including shrubs) that are cultivated in plantations for the products they yield year after year - such as fruit trees, vines, rubber trees, palm trees, etc. - are fixed assets. On the other hand, trees grown for timber that yield a finished product once only when they are ultimately felled are not fixed assets, just as cereals or vegetables that produce only a single crop when they are harvested cannot be fixed assets.

10.84 In general, when the production of fixed assets takes a long time to complete, those assets whose production is not yet completed at the end of the accounting period are recorded as work-in-progress. However, when the assets are produced on own account they are treated as being acquired by their users at the same time as they are produced and cannot therefore be recorded under the inventories, i.e., work-in-progress. Uncompleted assets produced on own account are therefore recorded as being acquired by their users, i.e., as gross fixed capital formation. These general principles must be applied to the production of cultivated assets such as animals or trees that may take a long time to reach maturity. Two cases need to be distinguished from each other: the production of natural assets by specialized producers, such as breeders or tree nurseries, and the own-account production of cultivated assets by their users.

10.85 In the case of the specialist producers, animals or trees whose production is not yet complete and are not ready for sale or delivery must be recorded as work-in-progress. Examples are one-year-old horses bred for sale as two-year-old race horses, or young fruit trees that need further growth before being marketable. Such work-in-progress is recorded and valued in exactly the same way as that originating in any other kind of production.

10.86 However, when animals or trees intended to be used as fixed assets are produced on own account by farmers or others, uncompleted assets in the form of immature animals, trees, etc. that are not ready to be used in production are not treated as work-in-progress but as gross fixed capital formation by the producing unit in its capacity as eventual user. The value of an uncompleted asset produced and acquired within a given period is obtained by multiplying the actual and estimated current basic price of the finished asset by the share of the production costs incurred in that period. If it is not feasible to estimate in this way, the value of the output and corresponding gross fixed capital formation may be approximated by the actual production costs incurred in the period.

Livestock

10.87 Gross fixed capital formation in livestock that are cultivated for the products they yield year after year (dairy cattle, draught animals, etc.) is measured by the value of acquisitions less disposals, taking account of the treatment just described of immature livestock produced on own account. It is therefore equal to the total value of all mature animals and immature animals produced on own account acquired by users of the livestock less the value of their disposals. Disposals consist of animals sold or otherwise disposed of, including those sold for slaughter, plus those animals slaughtered by their owners. Exceptional losses of animals due to major outbreaks of disease, contamination, drought, famine, or other natural disasters are recorded in the other changes in the volume of assets account and not as disposals. Incidental losses of animals due to occasional deaths from natural causes form part of consumption of fixed capital. Consumption of fixed capital on an individual animal is measured by the decline in its value as it gets older.

Plantations, orchards, etc.

10.88 Gross fixed capital formation in plantations, orchards, etc., consists of the value of the acquisitions less disposals of mature trees, shrubs, etc., including acquisitions of immature trees, shrubs, etc., produced on own account. As explained above, the value of the latter may be approximated, if necessary, by the value of costs incurred in their production during the period: for example, the costs of preparing the ground, planting, staking, protection from weather or disease, pruning, training, etc., until the tree reaches maturity and starts to yield a product. Disposals consist of trees, shrubs, etc., sold or otherwise transferred to other units plus those cut down before the end of their service lives. Disposals do not include exceptional losses of trees due to drought or other natural disasters such as gales or hurricanes, these being recorded in the other changes in the volume of assets account.

Acquisitions less disposals of intangible fixed assets (P.512)

10.89 Acquisitions less disposals of intangible fixed assets constitute the remaining component of gross fixed capital formation to be discussed. Intangible assets are defined and described in the annex to chapter XIII. They share with tangible fixed assets the characteristics that they are both produced as outputs from processes of production and are themselves used repeatedly or continuously in other processes of production. Intangible fixed assets include, for example, computer software or artistic originals whose use in production is restricted to the units that have established ownership rights over them or to other units licensed by the latter. Major improvements to these assets count as acquisitions; for example, the enhancement and extension of existing software systems.

Mineral exploration

Mineral exploration	(AN.1121)
	The value of expenditures on exploration for petroleum and natural gas and for non-petroleum deposits. These expenditures include prelicence costs, licence and acquisition costs, appraisal costs and the costs of actual test drilling and boring, as well as the costs of aerial and other surveys, transportation costs, etc., incurred to make it possible to carry out the tests.

10.90 Mineral exploration is undertaken in order to discover new deposits of minerals or fuels that may be exploited commercially. Such exploration may be undertaken on own account by enterprises engaged in mining or the extraction of fuels. Alternatively, specialized enterprises may carry out exploration either for their purposes or for fees. The information obtained from exploration influences the production activities of those who obtain it over a number of years. The expenditures incurred on exploration within a given accounting period, whether undertaken on own account or not, are therefore treated as expenditures on the acquisition of an intangible fixed asset and included in the enterprise's gross fixed capital formation.

10.91 The expenditures included in gross fixed capital formation include not only the costs of actual test drillings and borings, but also the costs incurred to make it possible to carry out tests, for example, the costs of aerial or other surveys, transportation costs, etc. The value of the resulting asset is not measured by the value of new deposits discovered by the exploration but by the value of the resources allocated to exploration during the accounting period. Consumption of fixed capital may be calculated for such assets by using average service lives similar to those used by mining or oil corporations in their own accounts.

Computer software

Computer software	(AN.1122) Computer programs, program descriptions and supporting materials for both systems and applications software. Included are purchased software and software developed on own account, if the expenditure is large. Large expenditures on the purchase, development or extension of computer databases that are expected to be used for more than one year, whether marketed or not, are also included.

10.92 Computer software that an enterprise expects to use in production for more than one year is treated as an intangible fixed asset. Such software may be purchased on the market or produced for own use. Acquisitions of such software are therefore treated as gross fixed capital formation. Software purchases on the market is valued at purchasers' prices, while software developed in-house is valued at its estimated basic price, or at its costs of production if it is not possible to estimate the basic price.

10.93 Gross fixed capital formation in software also includes the purchase or development of large databases that the enterprise expects to use in production over a period of time of more than one year. These databases are valued in the same way as software, described above.

Entertainment, literary or artistic originals

Entertainment, literary or artistic originals	(AN.1123) Original films, sound recordings, manuscripts, tapes, models, etc., on which drama performances, radio and television programming, musical performances, sporting events, literary and artistic output, etc., are recorded or embodied. Included are works produced on own account. In some cases, such as films, there may be multiple originals.
Other intangible fixed assets	(AN.1129) New information, specialized knowledge, etc., not elsewhere classified, whose use in production is restricted to the units that have established ownership rights over them or to other units licensed by the latter.

10.94 Originals consist of the original films, sound recordings, manuscripts, tapes, models, etc., on which drama performances, radio and television programming, musical performances, sporting events, literary and artistic output, etc., are recorded or embodied.

10.95 The acquisition of an original constitutes gross fixed capital formation. The original is often retained by its producer, but it may also be sold after it has been produced in order to be exploited by another unit. When it is sold the gross fixed capital formation is measured by the price paid by the purchaser to acquire the asset. If it is not sold, its valuation may be difficult because it depends on the future benefits that the owner expects to derive. These benefits may be very difficult to estimate in advance. In the absence of other information it may be necessary to value the original by its costs of production, as in the case of many other kinds of output produced for own gross fixed capital formation.

2. Changes in inventories (P.52)

10.96 Transactions involving inventories are treated in the same way as transactions involving any other asset, whether non-financial or financial. Thus, the value of changes in inventories recorded in the capital account is equal to the value of the inventories acquired by an enterprise less the value of the inventories disposed of during the accounting period. Some of these acquisitions and disposals are attributable to actual purchases or sales, but others reflect transactions that are internal to the enterprise.

10.97 In this context it is useful to distinguish between two functions performed by an enterprise: its function as a producer of goods and services and its function as an owner of assets. When a good is entered into inventories it is acquired as an asset by the owner either by purchase (or barter) or by an internal transaction with the producer. Conversely, a good leaving inventories represents the disposal of an asset by the owner either by sale or other use, by an internal transfer to the producer or possibly as a result of recurrent losses (recurrent wastage, accidental damage or pilfering). Inventory movements that are not attributable to actual purchases or sales of the goods concerned are valued as if the goods were being bought or sold at that time. Thus, changes in inventories are recorded as acquisitions and disposals by the enterprise and valued the same general way as changes in other assets.

10.98 The enterprise in its capacity as a producer may obtain goods or services for intermediate consumption either by purchasing them on the market for immediate use as intermediate inputs or by internal transfers from the owner out of inventories. In order to ensure that all the goods and services used for intermediate consumption are consistently valued at current prices, the goods transferred out of inventories are valued at current purchasers' prices. Similarly, the output produced by the producer may either be sold or otherwise disposed of or be transferred to inventories as finished products or work-in-progress. In order to ensure that output is consistently valued, finished goods transferred into inventories are valued as if they were sold at that time, while additions to work-in-progress are valued in proportion to the estimated current basic price of the finished product.

Materials and supplies

Materials and supplies (AN.121)

Goods that their owners intend to use as intermediate inputs in their own production processes, not to resell.

10.99 Materials and supplies consist of all goods that an enterprise holds in stock with the intention of using them as intermediate inputs into production. Not all necessarily get used in this way, however, as some may be lost as a result of physical deterioration, or recurrent accidental damage or pilfering. Such losses of materials and supplies are recorded and valued in the same way as materials and supplies actually withdrawn to be used up in production.

10.100 Materials and supplies consist of the kinds of goods that are entirely used up when they are fed into the production process. They do not, therefore, include stocks of newly acquired fixed assets, such as vehicles or microcomputers, although they may include small tools when these are not treated as fixed assets. Enterprises may hold a variety of quite different kinds of goods under the heading of materials and supplies, the most common types being fuels, industrial raw materials, agricultural materials, semi-processed goods, components for assembly, packaging materials, foodstuffs, office supplies, etc. Every enterprise, including non-market producers owned by government units, may be expected to hold some inventories of materials and supplies, if only inventories of office supplies.

10.101 Materials and supplies do not include works of art or stocks of precious metals or stones acquired by enterprises as valuables. By definition, valuables are assets held as stores of value and they are not intended to be used as intermediate inputs into production. On the other hand, there are some producers that do use gold, diamonds, etc. as intermediate inputs into the production of other goods or services - for example, manufacturers of jewellery or dentists.

Stocks of gold, diamonds, etc., intended for industrial use or other production in this way are, of course, recorded under materials and supplies.

Work-in-progress

Work-in-progress	(AN.122)
	Goods and services that are partially completed but that are not usually turned over to other units without further processing or that are not mature and whose production process will be continued in a subsequent period by the same producer. Excluded are partially completed structures for which the ultimate owner is deemed to have taken ownership, either because the production is for own use or as evidenced by the existence of a contract of sale/purchase. They consist of work-in-progress on cultivated assets and other work-in-progress, as defined below.

10.102 Work-in-progress consists of output produced by an enterprise that is not yet finished, i.e., not yet sufficiently processed to be in a state in which it is normally supplied to other institutional units. Work-in-progress occurs in all industries, but is especially important in those in which some time is needed to produce a unit of finished output - for example, in agriculture, or in industries producing complex fixed assets such as ships, dwellings, computers, software or films. Work-in-progress can therefore take a wide variety of different forms ranging from growing crops to partially completed film productions or computer programs. Although work-in-progress is output that has not reached the state in which it is normally supplied to others, its ownership is nevertheless transferable, if necessary. For example, it may be sold under exceptional circumstances such as the liquidation of the enterprise.

10.103 As explained in chapter VI also, work-in-progress must be recorded for any production process that is not finished at the end of the accounting period. The shorter the accounting period, the more important work-in-progress is likely to be relatively to finished output. In particular, it is likely to be more significant for quarterly accounts than annual accounts, if only because the production of many agricultural crops is completed within a year but not within a quarter. Assuming that prices and costs remain stable during the period of production, the value of the additions to work-in-progress within a given accounting period is obtained by calculating the fraction of the total production costs incurred in that period and applying that fraction to the basic price realized by the finished product. Thus, the value of the output of the finished product is distributed over the accounting periods in which it was produced in proportion to the costs incurred in each period. If the average levels of prices and costs change from period to period, the output should be allocated initially using the prices and costs at the time the production is finished, and then the values of the work-in-progress thus calculated for earlier periods should be revalued in proportion to the change in average cost levels from period to period.

10.104 If the accounts have to be compiled before the production process is finished and it is not feasible to make a satisfactory estimate of the basic price, additions to work-in-progress may be provisionally estimated by the value of the production costs incurred in the period with some mark-up for net operating surplus or mixed income. Provisional estimates of this kind may be subsequently revised, if necessary, when the relevant basic prices become known.

10.105 Reductions in work-in-progress take place when the production process is completed. At that point, all work-in-progress is transformed into a finished product. Thus, the entire stock of work-in-progress carried forward from earlier accounting periods is recorded as being withdrawn from stock when the production process is finished. If prices and costs have risen, work-in-progress carried forward from previous periods must be revalued using the prices and costs of the period in which the production is finished. Current losses from work-in-progress resulting from physical deterioration or recurrent accidental damage or pilfering should be deducted from the additions to work-in-progress accruing as a result of the production carried out in the same period.

Work-in-progress on cultivated assets

Work-in-progress on cultivated assets (AN.1221)

Livestock raised for products yielded only on slaughter, such as fowl and fish raised commercially, trees and other vegetation yielding once-only products on destruction and immature cultivated assets yielding repeat products.

10.106 The natural growth of plants, trees and livestock, including farmed fish, is included within the production boundary when it is carried out under the direct control, responsibility and management of an institutional unit. In the present context it is necessary to distinguish single-use plants, trees and livestock that produce an output once only (when the plants or trees are cut down or uprooted or the livestock slaughtered) from trees (including vines and shrubs) and livestock that are used repeatedly or continuously for more than one year to produce outputs such as fruit, nuts, rubber, milk, wool, power, transportation and entertainment. Work-in-progress may need to be recorded for both types of crops or livestock.

10.107 In the case of single-use plants or livestock, any such crops or livestock that have not yet been harvested or slaughtered at the end of the accounting period constitute work-in-progress, as follows:

(a) When accounts are compiled quarterly, the value of the finished output of an annual crop - i.e., the value of the grain or other crop actually harvested - may be distributed over the quarters in which production has been taking place in proportion to the costs incurred each quarter. The value of the output produced in the quarter in which the crop is harvested is then equal to the value of the harvested crop less the value of the additions to work-in-progress produced in the previous quarters;

(b) If the accounts are compiled annually and if the crop year is contained within the accounting year, it will be unnecessary to calculate work-in-progress, except possibly under conditions of high inflation;

(c) If the accounts are compiled annually and if the accounting year ends in the middle of the crop year, it becomes necessary to calculate both additions to, and reductions of, work-in-progress during the accounting year. This does not imply, however, that the value of the additions to work-in-progress for the latest year covered must be estimated in advance of knowing the value of the harvested crop, as any annual crop sown in year t is likely to have been harvested by the time the annual accounts for year t are compiled and published. In any case, provisional estimates of additions to work-in-progress can always be calculated on the basis of costs plus a mark-up and revised when the value of the harvested crop becomes known.

10.108 Changes in work-in-progress for livestock reared for slaughter, including poultry, may be approximated by changes in the numbers of such livestock between the beginning and the end of the accounting period multiplied by the average price of the animals or poultry concerned.

10.109 In the case of trees and livestock that are intended for repeated or continuous use in production and are treated as fixed assets when they reach maturity, work-in-progress may have to be calculated in the case of specialist producers of such assets: for example, breeders of race horses or other special animals. However, when they are being cultivated or reared for own use - i.e., produced on own account - the output produced is classified as gross fixed capital formation (see paragraphs 10.85 and 10.86 above).

Work-in-progress on other fixed assets

Other work-in-progress (AN.1222)

Goods other than cultivated assets and services that have been partially processed, fabricated or assembled by the producer but that are not usually sold, shipped or turned over to others without further processing.

10.110 Structures and some other fixed assets, such as ships, typically take a long time to complete and frequently span two or more accounting periods. However, the output produced each period is classified as work-in-progress only when the producer, and not the eventual user, is the owner of the output produced. Uncompleted fixed assets that are being produced on own account by their eventual users, and also structures that are being produced under a contract of sale agreed in advance, are treated as being acquired by their users and cannot, therefore, be recorded as work-in-progress of the producers.

Finished goods

Finished goods (AN.123)

Goods that are ready for sale or shipment by the producer.

10.111 Finished goods consist of goods produced as outputs that their producer does not intend to process further before supplying them to other institutional units. A good is finished when its producer has finished with it, even though it may subsequently be used as an intermediate input into other processes of production. Thus, inventories of coal produced by a mining enterprise are classified as finished products, although inventories of coal held by a power station are classified under materials and supplies. Inventories of batteries produced by a manufacturer of batteries are finished goods, although inventories of the same batteries held by manufacturers of vehicles and aircraft are classified under materials and supplies.

10.112 Inventories of finished goods may be held only by the enterprises that produce them. Finished goods entering or leaving inventories are valued at the basic prices of those goods at the times the entries or withdrawals take place. Current losses of finished goods resulting from physical deterioration or recurrent accidental damage or pilfering should be treated in the same way as withdrawals.

Goods for resale

Goods for resale (AN.124)

Goods acquired by enterprises, such as wholesalers and retailers, for the purpose of reselling them without further processing (that is, not transformed other than by presenting them in ways that are attractive to the customer).

10.113 Goods for resale are goods acquired by enterprises, such as wholesalers or retailers, for the purpose of reselling them to their customers. Goods for resale are not processed further by the enterprises that purchase them, except for presenting them for resale in ways that are attractive to their customers. Thus, goods for resale may be transported, stored, graded, sorted, washed, packaged, etc. by their owners but are not otherwise transformed.

10.114 Goods for resale entering the inventories of the enterprises are valued at their actual or estimated purchasers' prices. These prices include any additional transportation charges paid to enterprises other than the suppliers of the goods, but not the costs of any transport services produced on own account by the enterprise taking delivery. Goods acquired by barter are valued at their estimated purchasers' prices at the time of acquisition.

10.115 Goods for resale withdrawn from inventories are valued at the purchasers' prices at which they can be replaced at the time they are withdrawn as distinct from the purchasers' prices that may have been paid for them when they were acquired. Reductions in inventories are valued in this way whether the goods withdrawn are sold at a profit or at a loss, or even not sold at all as a result of physical deterioration or recurrent accidental damage or pilfering.

3. Acquisitions less disposals of valuables (P.53)

Precious metals and stones (AN.131)

Precious metals and stones that are not held by enterprises for use as inputs into processes of production.

Antiques and other art objects (AN.132)

Paintings, sculptures, etc., recognized as works of art and antiques.

Other valuables (AN.139)

Valuables not elsewhere classified, such as collections and jewellery of significant value fashioned out of precious stones and metals.

10.116 Valuables are assets that are not used primarily for production or consumption, that do not deteriorate over time under normal conditions and that are acquired and held primarily as stores of value. They are held in the expectation that their prices, relative to other goods and services, will not decline over time and possibly increase. In other words, valuables are expected to hold their value in real terms in the long run, even though there may be some periods of time when their real value declines. Valuables consist of:

(a) Precious stones and metals such as diamonds, non-monetary gold, platinum, silver, etc., held by any units including enterprises provided that they are not intended to be used as intermediate inputs into processes of production;

(b) Paintings, sculptures, etc., recognized as works of art and antiques;

(c) Other valuables, such as jewellery fashioned out of precious stones and metals and collections.

10.117 Acquisitions and disposals of new or existing assets in the form of valuables are recorded in the capital account. Acquisitions are valued at the actual or estimated prices payable by the units acquiring the assets to the units disposing of the assets plus any associated costs of ownership transfer incurred by the units acquiring the assets such as fees payable to expert valuers, agents, auctioneers, etc. The prices of valuables payable to dealers include their margins, of course. Disposals are valued at the prices payable by the units acquiring the assets to the units disposing of the assets minus any associated costs of ownership transfer incurred by the latter. On aggregation, therefore, acquisitions less disposals of valuables include dealers' margins and the costs of ownership transfer on new and existing valuables, whether the transactions consist of purchases and sales, barter or capital transfers in kind.

C. Consumption of fixed capital

10.118 Consumption of fixed capital constitutes a negative change in the value of the fixed assets used for production. It covers both tangible fixed assets and intangible fixed assets, such as mineral exploration costs and software. Consumption of fixed capital must be measured with reference to a given set of prices, i.e., the average prices of the period. It may then be defined as the decline, between the beginning and the end of the accounting period, in the value of the fixed assets owned by an enterprise, as a result of their physical deterioration and normal rates of obsolescence and accidental damage. The value of a fixed asset depends upon the benefits that can be expected from using it in production over the remainder of its service life. This value is given by the present discounted value, calculated at the average prices of the period, of the stream of rentals that the owner of a fixed asset could expect if it were rented out to producers over the remainder of its service life. Consumption of fixed capital is then measured by the proportionate decline in this value between the beginning and end of the accounting period.

10.119 Consumption of fixed capital thus measures the decline in the usefulness of a fixed asset for purposes of production. It is a measure that depends on the productive potential of an asset over its normal service life. The value of a fixed asset at any point in time inevitably involves expectations about the future, but this is true of virtually all assets including financial assets and valuables. It is possible to derive reasonable estimates of the consumption of fixed capital on the basis of the average service lives of assets and simple assumptions about the rates of decline of their efficiency in production over time. Despite elements of uncertainty, producers and users of fixed assets have to take views about their values in practice, and markets in which new and existing fixed assets are actively traded provide information that should be taken into account in calculating consumption of fixed capital. Consumption of fixed capital has also to be calculated in respect of major improvements to non-produced assets and costs of ownership transfer associated with non-produced assets as these add to the value of such assets and are a component of gross fixed capital formation. The concept and measurement of the consumption of fixed capital has been explained in chapter VI, and it is not necessary to go into further detail at this point.

D. Acquisitions less disposals of non-produced non-financial assets (P.513)

The asset boundary

10.10 First, it must be noted that the System's accounts and balance sheets are compiled for institutional units or groups of units and can only refer to the values of assets that belong to the units in question. Only those naturally occurring assets over which ownership rights have been established and are effectively enforced can therefore qualify as economic assets and be recorded in balance sheets. They do not necessarily have to be owned by individual units, and may be owned collectively by groups of units or by governments on behalf of entire communities. Certain naturally occurring assets, however, may be such that it is not feasible to establish ownership over them: for example, air, or the oceans. In addition, there may be others that cannot be treated as economic assets because they do not actually belong to any particular units. These include not only those whose existence is unknown but also those, including uncultivated forests, that may be known to exist but remain so remote or inaccessible that, in practice, they are not under the effective control of any units.

10.11 Secondly, in order to comply with the general definition of an economic asset, natural assets must not only be owned but capable of bringing economic benefits to their owners, given the technology, scientific knowledge, economic infrastructure, available resources and set of relative prices prevailing on the dates to which the balance sheet relates or expected in the near future. Thus, known deposits of minerals that are not commercially exploitable in the foreseeable future are not included in the balance sheets of the System, even though they may possibly become commercially exploitable at a later date as a result of major, unforeseen advances in technology or major changes in relative prices such as those resulting from the oil shocks of the 1970s and 1980s.

10.12 Naturally occurring assets in the form of biota - trees, vegetation, animals, birds, fish, etc. - are renewable. The growth of trees, crops or other vegetation or the rearing of animals, birds, fish, etc., may take place under the direct control, responsibility and management of institutional units. In this situation, the assets are cultivated, and the activity is treated as falling within the production boundary of the System. The resulting assets are obviously produced assets that fall within the asset boundary of the System. However, some renewable assets in the form of biota may also be classified under the heading of non-produced assets: namely, forests and the wildlife inhabiting them that are actually owned by institutional units but whose renewal is not under the direct control, responsibility and management of those units. The growth of animals, birds, fish, etc., living in the wild, or growth of uncultivated vegetation in forests, is not an economic process of production so that the resulting assets cannot be produced assets. Nevertheless, when the forests and/or the animals, birds, fish, etc. are actually owned by institutional units and are a source of benefit to their owners, they constitute economic assets. Finally, when wild animals, birds, fish, etc. live in locations such that no institutional units are able to exercise effective ownership rights over them - for example, in the oceans or quite inaccessible regions - they fall outside the asset boundary. Similarly, the forests or other vegetation growing in such regions are not counted as economic assets.

10.120 Non-produced non-financial assets consist of land, other tangible assets that may be used in the production of goods and services, and intangible assets. Changes in the value of these assets owned by institutional units resulting from transactions with other institutional units are recorded in the capital account. These assets may be acquired or disposed of by purchase or sale, barter or capital transfer in kind. The changes recorded in the capital account consist of the total values of the assets acquired during the accounting period less the total value of the assets disposed of.

1. Acquisitions less disposals of land

Land (AN.211)

The ground, including the soil covering and any associated surface waters, over which ownership rights are enforced. Also included are major improvements that cannot be physically separated from the land itself. Excluded are any buildings or other structures situated on it or running through it; cultivated crops, trees and animals; subsoil assets; non-cultivated biological resources and water resources below the ground. Land consists of land underlying buildings and structures, land under cultivation, recreational land and associated surface water and other land and associated surface water, as defined below.

Land underlying buildings and structures

(AN.2111)

Land on which dwellings, non-residential buildings and structures are constructed or into which their foundations are dug, including yards and gardens deemed an integral part of farm and non-farm dwellings and access roads to farms.

Land under cultivation

(AN.2112)

Land on which agricultural or horticultural production is carried on for commercial or subsistence purposes, including, in principle, land under plantations, orchards and vineyards.

Recreational land and associated surface water

(AN.2113)

Land that is used as privately owned amenity land, parklands and pleasure grounds and publicly owned parks and recreational areas, together with associated surface water.

Other land and assosiated surface water

(AN.2119)

Land not elsewhere classified, including private gardens and plots not cultivated for subsistence or commercial purposes, communal grazing land, land surrounding dwellings in excess of those yards and gardens deemed an integral part of farm and non-farm dwellings and associated surface water.

10.121 Land is defined in the System as the ground itself, including:

(a) The soil covering;

(b) Associated surface water;

but *excluding:*

(a) Buildings or other structures constructed on the land or through it - roads, office buildings, tunnels, etc.;

(b) Vineyards, orchards, or other plantations of trees and any growing crops, etc.;

(c) Subsoil assets;

(d) Non-cultivated biological resources;

(e) Water resources below the ground.

The associated surface water includes any inland waters - reservoirs, lakes, rivers, etc. - over which ownership rights can be exercised and which can, therefore, be the subject of transactions between institutional units.

10.122 The total stock of land is not fixed. For example, it may be marginally increased or decreased by reclaiming land from the sea or by erosion by the sea. Its quality may also be improved by clearing forests or rocks and by building dykes, irrigation channels, or windbreaks, etc. Similarly, its quality may be damaged by inappropriate agricultural use, pollution, natural disasters, etc. Activities that lead to major improvements in the quantity, quality or productivity of land or prevent its deterioration are treated as gross fixed capital formation and shown separately in the classification. These activities represent productive activity of institutional units that add to the value of land.

10.123 By convention, all owners or purchasers of land located within the economic territory are resident institutional units. If an institutional unit owning land has no centre of economic interest in the territory, a notional resident institutional unit has to be created that is deemed to own the land, while the non-resident unit is deemed to own the notional unit. All transactions whereby land is acquired or disposed of, therefore, take place between resident units (except when the boundary of the economic territory is itself changed by the purchase or sale of land: e.g., the purchase of land by a foreign government that increases the size of its enclave).

10.124 As explained in paragraphs 10.59 and 10.60 above, the costs involved in the transfer of ownership of land are not included in the value of land. The fees payable by the purchaser to surveyors, valuers, estate agents, lawyers, etc., together with any taxes payable on the transfer of land, are treated as expenditures on gross fixed capital formation by the purchaser. The corresponding fees or taxes payable by the seller also contribute to gross fixed capital formation as they reduce the value of the seller's negative gross fixed capital formation. In consequence, acquisitions and disposals of land are recorded at the same value for both the purchaser and the seller. If the ownership of land is transferred by barter or by a capital transfer in kind, the same value must be imputed for both parties to the transaction based on the current market value of the type of land in question. Assuming that both parties to the transaction are residents, it follows that, for the economy as a whole, the aggregate value of total purchases of land must equal the aggregate value of total sales, although this is not generally true at lower levels of aggregation, such as individual sectors or sub-sectors. The value of acquisitions less disposals of land is thus zero for the economy as a whole (excluding transactions that change the boundary of the economic territory itself, as noted above).

10.125 Buildings, or other structures, and plantations are often purchased or sold together with the land on which they are situated, without separate valuations being placed on the structures and the land. Even if it is not feasible to obtain separate valuations, as may be the case for existing structures, it may be possible to determine which out of the land or the structure accounts for most of their combined value and to classify the transaction as the purchase of land or of a structure depending upon which has the greater value. If it is not possible to determine whether the land or the structure is the more valuable, by convention, the transaction should be classified as the purchase of a structure, that is, as gross fixed capital formation. A similar principle holds for plantations.

2. Acquisitions less disposals of other tangible non-produced assets

Subsoil assets (AN.212)

Proven reserves of mineral deposits located on or below the earth's surface that are economically exploitable, given current technology and relative prices. Ownership rights to the subsoil assets are usually separable from those to the land itself. Subsoil assets consist of coal, oil and natural gas reserves, metallic mineral reserves and non-metallic mineral reserves, as defined below.

Coal, oil and natural gas reserves (AN.2121)

Anthracite, bituminous and brown coal deposits; petroleum and natural gas reserves and fields.

Metallic mineral reserves	(AN.2122)	Ferrous, non-ferrous and precious metal ore deposits.
Non-metallic mineral reserves	(AN.2123)	Stone quarries and clay and sand pits; chemical and fertilizer mineral deposits; salt deposits; deposits of quartz, gypsum, natural gem stones, asphalt and bitumen, peat and other non-metallic minerals other than coal and petroleum.
Water resources	(AN.214)	Aquifers and other groundwater resources to the extent that their scarcity leads to the enforcement of ownership and/or use rights, market valuation and some measure of economic control.
Non-cultivated biological resources	(AN.213)	Animals and plants that yield both once-only and repeat products over which ownership rights are enforced but for which natural growth and/or regeneration is not under the direct control, responsibility and management of institutional units. Examples are virgin forests and fisheries within the territory of the country. Only those resources that are currently, or are likely soon to be exploitable for economic purposes should be included.

10.126 In practice, these consist of acquisitions less disposals of subsoil assets. Subsoil assets consist of known deposits of coal, oil, gas or other fuels and metallic ores, and non-metallic minerals, etc., that are located below or on the earth's surface, including deposits under the sea. The transactions recorded in the capital account refer, of course, only to those subsoil assets over which ownership rights have been established. In most cases, subsoil assets may be owned separately from land below which they are located, but in other cases the law may stipulate that the ownership of the subsoil assets is inseparably linked to that of the land.

10.127 The transactions in subsoil assets recorded in the capital account refer to acquisitions or disposals of deposits of subsoil assets by purchases or sales, barter or transfers in kind; in other words, they consist of transactions in which the ownership of such assets passes from one institutional unit to another. Reductions in the value of known reserves of subsoil assets resulting from their depletion as a result of extracting the assets for purposes of production are not recorded in the capital account. However, depletion should be taken into account when valuing the reserves shown in the opening and closing balance sheets in which case it is recorded in the other changes in the volume of assets account.

10.128 Acquisitions and disposals of subsoil assets are recorded and valued in the same way as transactions in land. By convention, all owners are resident institutional units, and therefore all transactions whereby subsoil assets are acquired or disposed of take place between resident units. The acquisitions and disposals exclude the associated costs of ownership transfer. These costs are grouped with those for land and classified as gross fixed capital formation.

10.129 The owner of subsoil assets, who is often a government unit, may grant a concession or lease to another institutional unit entitling the latter to extract the asset over a specified period of time in return for a series of payments (usually described as royalties). This arrangement is similar to a landowner conceding to a tenant the right to exploit the land in return for the payment of rents, except that subsoil assets are exhaustible. The payments are property incomes and recorded as rent in the primary distribution of income account. However, the holder of the concession or lease may be entitled, or permitted by the owner, to sell the concession or lease to a third party. Such a sale is recorded in the capital account, but as the sale of an intangible non-produced asset. It is therefore recorded under a separate heading in the account. Sales of leases on land or buildings are treated similarly.

3. Acquisitions less disposals of intangible non-produced assets

Patented entities	(AN.221) Inventions in categories of technical novelty that, by law or by judicial decision, can be afforded patent protection. Examples include constitutions of matter, processes, mechanisms, electrical and electronic circuits and devices, pharmaceutical formulations and new varieties of living things produced by artifice.
Leases and other transferable contracts	(AN.222) Leases or contracts where the lessee has the right to convey the lease to a third party independently of the lessor. Examples include leases of land and buildings and other structures, concessions or exclusive rights to exploit mineral deposits or fishing grounds, transferable contracts with athletes and authors and options to buy tangible assets not yet produced. Leases on the rental of machinery are excluded from non-financial intangible assets.
Purchased goodwill	(AN.223) The difference between the value paid for an enterprise as a going concern and the sum of its assets less the sum of its liabilities, each item of which has been separately identified and valued. The value of goodwill, therefore, includes anything of long-term benefit to the business that has not been separately identified as an asset, as well as the value of the fact that the group of assets is used jointly and is not simply a collection of separable assets.
Other intangible non-produced assets	(AN.229) Intangible non-produced assets not elsewhere classified.

10.130 Intangible non-produced assets consist of patented entities, leases or other transferable contracts, purchased goodwill and other intangible non-produced assets. Such leases are on land, subsoil assets and residential and non-residential buildings. The value of the acquisitions or disposals of leases or other transferable contract recorded in the capital account consists of payments made to the original or subsequent tenants or lessees when the leases or concessions are sold or transferred to other institutional units. The value of acquisitions of intangible non-produced assets include the associated costs of ownership transfer incurred by the purchaser while disposals are valued after deducting the costs of ownership transfer incurred by the seller. The costs of ownership transfer are a component of gross fixed capital formation.

E. Capital transfers (D.9)

1. Introduction

10.131 Capital transfers receivable and payable are recorded on the right side of the capital account. A transfer is defined as a transaction in which one institutional unit provides a good, service or asset to another unit without receiving in return from the latter any counterpart in the form of a good, asset or service (see chapter VIII). Transfers may be made in cash or in kind as follows:

(a) A cash transfer consists of the payment of money by one unit to another without any counterpart;

(b) A transfer in kind consists of the transfer of ownership of a good or asset (other than cash), the cancellation of a liability or the provision of a service without any counterpart.

10.132 Transfers in cash and in kind may both be divided into current and capital transfers as follows:

(a) A capital transfer in kind consists of the transfer of ownership of an asset (other than inventories and cash) or the cancellation of a liability by a creditor, without any counterpart being received in return;

(b) A capital transfer in cash consists of the transfer of cash that the first party has raised by disposing of an asset, or assets (other than inventories), or that the second party is expected, or required, to use for the acquisition of an asset, or assets (other than inventories). The second party, the recipient, is often obliged to use the cash to acquire an asset, or assets, as a condition on which the transfer is made.

Thus, whether the transfer is made in cash or in kind, it should result in a commensurate change in the financial, or non-financial, assets shown in the balance sheets of one or both parties to the transaction. A capital transfer in cash serves a similar purpose to the actual transfer of an asset in so far as it should lead either to a decrease in the first party's assets or an increase in the second party's assets, or both. Capital transfers may also be distinguished by the fact that they tend to be large and infrequent, but they cannot be defined in terms of size or frequency. Their essential characteristic is that they should involve the disposal or acquisition of assets by one or both parties to the transaction.

10.133 A current transfer reduces the income and consumption possibilities of the first party and increases the income and consumption possibilities of the second party. Current transfers are therefore not linked to, or conditional, on the acquisition or disposal of a tangible fixed asset or assets by one or both parties to the transaction. Some cash transfers may be regarded as capital by one party to the transfer but as current by the other. For example, the payment of an inheritance tax may be regarded as the transfer of capital by the taxpayer but be regarded as a current receipt by government because it receives many such transfers. Similarly, a large country that makes investment grants to a number of smaller countries may regard the grants as current transfers even though they are specifically intended to finance the acquisition of capital assets. In an integrated system of accounts, such as the SNA, it is not feasible, however, to classify the same transaction differently in different parts of the System. Accordingly, a transfer should be classified as capital for both parties even if it involves the acquisition or disposal of an asset, or assets, by only one of the parties.

10.134 There may be cases in which it is difficult to decide on the evidence available whether to classify a cash transfer as current or capital. When there is serious doubt, the transfer should be classified as current rather than capital. It should be noted, however, that the decision as to which way to classify a transfer has important consequences for the allocation of saving between sectors and subsectors, and possibly between the economy as a whole and the rest of the world. Other things being equal, a current transfer increases the saving of the recipient and reduces that of the donor, whereas a capital transfer does not affect the saving of either party. If, therefore, cash transfers are incorrectly classified between current and capital, the saving behaviour recorded for the units or subsectors involved may be misleading for purposes of economic analysis and policymaking.

10.135 A capital transfer in kind is recorded when the ownership of the asset is transferred or the liability cancelled by the creditor. A capital transfer in cash is recorded when the payment is due to be made. The transfer of a non-financial asset is valued by the estimated price at which the asset, whether new or used, could be sold on the market plus any transport, installation or other costs of ownership transfer incurred by the donor but excluding any such charges incurred by the recipient. Transfers of financial assets, including the cancellation of debts, are valued in the same way as other acquisitions or disposals of financial assets or liabilities.

2. Capital taxes (D.91)

10.136 Capital taxes consist of taxes levied at irregular and very infrequent intervals on the values of the assets or net worth owned by institutional units or on the values of assets transferred between institutional units as a result of legacies, gifts inter vivos or other transfers. They include the following taxes:

(a) Capital levies: These consist of taxes on the values of the assets or net worth owned by institutional units levied at irregular, and very infrequent, intervals of time. Capital levies are treated as exceptional both by units concerned and by the government. They may be payable by households or enterprises. They include betterment levies: i.e., taxes on the increase in the value of agricultural land due to planning permission being given by government units to develop the land for commercial or residential purposes (Government Finance Statistics (GFS): 4.5);

(b) Taxes on capital transfers: These consist of taxes on the values of assets transferred between institutional units. They consist mainly of inheritance taxes, or death duties, and gift taxes, including gifts inter vivos made between members of the same family to avoid, or minimize, the payment of inheritance taxes. They do not include taxes on sales of assets as these are not transfers (GFS: 4.3).

3. Investment grants (D.92)

10.137 Investment grants consist of capital transfers in cash or in kind made by governments to other resident or non-resident institutional units to finance all or part of the costs of their acquiring fixed assets. The recipients are obliged to use investment grants received in cash for purposes of gross fixed capital formation, and the grants are often tied to specific investment projects, such as large construction projects. If the investment project continues over a long period of time, an investment grant in cash may be paid in instalments. Payments of instalments continue to be classified as capital transfers even though they may be recorded in a succession of different accounting periods.

10.138 Investment grants in kind consist of transfers of transport equipment, machinery and other equipment by governments to other resident or non-resident units and also the direct provision of buildings or other structures for resident or non-resident units. These may be constructed by enterprises owned by the donor government or by other enterprises that are paid directly by the donor government. Investment grants do not include transfers of military equipment in the form of weapons or equipment whose sole function is to fire such weapons, as these are not classified as fixed assets.

4. Other capital transfers (D.99)

10.139 Other capital transfers consist of all capital transfers except capital taxes and investment grants. One notable category included here is the cancellation of debt by mutual agreement between the creditor and the debtor. Such a cancellation is treated as a capital transfer from the creditor to the debtor equal to the value of the outstanding debt at the time of cancellation. It includes the cancellation of debt owned by non-residents to residents, and vice versa.

10.140 However, the writing off of debt is not a transaction between institutional units and therefore does not appear either in the capital account or the financial account of the System. If the creditor accepts such a write off or default, it should be recorded in the other changes in the volume of assets account of the creditor and the debtor. Provisions for bad debt are treated as book-keeping entries that are internal to the enterprise and do not appear anywhere in the System. The unilateral repudiation of debt by a debtor is also not a transaction and is not recognized in the System.

10.141 Capital transfer may take various other forms, of which some examples are given below:

(a) Major payments in compensation for extensive damages or serious injuries not covered by insurance policies. The payments may be awarded by courts of law or settled out of court. They may be made to resident or non-resident units. They include payments of compensation for damages caused by major explosions, oil spillages, the side effects of drugs, etc;

(b) Transfers from government units to publicly or privately owned enterprises to cover large operating deficits accumulated over two or more years;

(c) Transfers from central government to units at lower levels of government to cover some, or all, of the costs of gross fixed capital formation or large expenditure deficits accumulated over two or more years;

(d) Legacies or large gifts inter vivos, including legacies to NPIs;

(e) Exceptionally large donations by households or enterprises to NPIs to finance gross fixed capital formation: for example, gifts to universities to cover the costs of building new residential colleges, libraries, laboratories, etc.