



STATISTICAL PAPERS

Series **M** No. **60**

**PROVISIONAL  
INTERNATIONAL GUIDELINES  
ON THE NATIONAL  
AND SECTORAL BALANCE-SHEET  
AND RECONCILIATION ACCOUNTS  
OF THE SYSTEM  
OF NATIONAL ACCOUNTS**

**UNITED NATIONS**

DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
STATISTICAL OFFICE

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**UNITED NATIONS**  
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## PREFACE

National and sectoral balance-sheets and revaluation accounts which cover the real and financial assets and the liabilities of institutional sectors form an integral part of the United Nations System of National Accounts (SNA). 1/ The SNA report which was adopted by the Statistical Commission at its fifteenth session and published in 1968 delineates the place, structure and basic concepts of balance-sheet and revaluation accounts within the framework of the system. It does not, however, provide specific definitions and classifications or standard accounts and supporting tables for such accounts. The Statistical Commission, when adopting the SNA report, therefore requested that detailed international guidelines for balance-sheet accounts and analyses of the links between them and the transaction accounts should also be prepared.

The present publication contains detailed international guidelines on balance-sheet and reconciliation accounts within the framework of SNA. The publication reflects the results of work, consultations with statistical authorities and discussions at meetings during the past nine years. The first draft of the detailed guidelines, "The proposed balance-sheet and revaluation accounts of the System of National Accounts (SNA)" was prepared with the assistance of J. R. S. Revell as consultant and was considered by the Statistical Commission at its sixteenth session. It was also discussed by a Working Party of the Conference of European Statisticians and was the subject of correspondence with national statistical authorities. Based on those discussions and comments and on further research, a second draft of the guidelines was prepared with the assistance of H. J. Spicer as consultant. That paper, in turn, was revised in the light of further discussions and consultations and a final version was adopted as provisional guidelines by the Statistical Commission at its eighteenth session.

The guidelines as presented in this publication relate to the balance-sheet and reconciliation accounts of institutional units only. They do not deal with statistics of the stocks of tangible assets which establishment-type units use in producing goods and services. These statistics are important in studying and analysing productive capacity and its utilization, capital inputs, capital-output ratios etc. International guidelines on statistics of tangible assets are now being developed. 2/

The present publication is organized in the following way. Chapter I discusses the uses to which data on balance-sheets and reconciliation accounts of institutional

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1/ A System of National Accounts, Series F, No. 2, Rev. 3 (United Nations publication, Sales No. E.69.XVII.3). In the present publication, the System of National Accounts publication is referred to as "the SNA report".

2/ See "Draft international guidelines on statistics of tangible assets" (ST/ESA/STAT.90).

sectors may be put. The following chapter deals with the relationship of the proposed guidelines to the transactions accounts of the SNA report. Chapter III defines national wealth and explains the concept of the independent net work of corporations. The definition of the statistical units recommended for the balance-sheet accounts and their classification into institutional sectors are discussed in the following chapter. Chapter V proposes schemes of classification for assets and liabilities. The conceptual and practical problems of valuation of assets and liabilities and the entries in the reconciliation accounts, which concern the differences between the capital finance transactions during a period of account and the changes in the balance-sheet figures between the beginning and the end of the period are discussed in chapters VI and VII. The standard accounts and supporting tables on balance sheets and reconciliations which should be added to the transactions accounts of SNA are shown in chapter VIII. Chapter IX contains a brief discussion of the statistical sources and practical problems of compiling balance-sheet and reconciliation data.

It is recognized that compilation of the complete array of statistics discussed in this document is probably beyond the capacity of any country at the present time. Some countries are able to compile some parts of the data suggested here; in particular there have been a number of instances of the preparation of partial or complete national balance sheets. The compiling of reconciliation accounts is a more distant goal. Nevertheless, it is considered useful to present the reconciliation accounts in some detail in order to show how they fit into the structure of the system of national accounts as a whole.

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## Chapter I

### USES OF BALANCE-SHEET AND RECONCILIATION ACCOUNTS

1.1. Countries are undertaking work on balance-sheets to an increasing extent because they consider it necessary to have the data to monitor, assess and understand economic and financial conditions and behaviour. The practical difficulties of compiling balance-sheets and the concentration on transactions in national accounting have slowed these efforts. This chapter outlines these developments and indicates a number of the major purposes for which balance-sheet statistics are or may be used. The discussion is not exhaustive, in part because of the limited national experience in compiling and using balance-sheet data.

#### The growing need for balance-sheets

1.2. In order to understand the flows of national income and expenditure, it is necessary to know the ways in which and the means through which, the institutional sectors of an economy finance their activities. Consequently, an increasing number of countries are compiling comprehensive capital finance accounts for institutional sectors and subsectors that link transactions in saving and "real" capital with transactions in financial claims and that classify the latter transactions according to type of claim. Such accounts have proved to be useful in analysing and forecasting financial requirements and behaviour; as a result they have contributed to formulating monetary policies and to managing the finance of economic activities. It is, however, being increasingly realized that figures of levels of financial assets and liabilities as well as of flows are needed in order to understand financial conditions and behaviour. Thus an institutional sector with funds to invest will be influenced by the pattern of the investments already held. Likewise, an institution needing finance will pay heed to its existing pattern of indebtedness. An individual corporation surely pays equal attention to its profit-and-loss and to its balance-sheet accounts. Accounts on financial transactions have to some extent been neglected, because there still is no generally accepted theory of the role of finance in an economy; one reason for this may be the lack of supporting balance-sheet accounts.

1.3. There is also growing recognition of the needs for balance-sheet data on holdings of tangible assets in dealing with economic and other problems. Data on the level of the stocks of raw materials and products of enterprises are wanted in analysing enterprises' financial requirements and in scheduling their production and purchases. The magnitude and character of the stocks of fixed and circulating assets of enterprises are important factors in their capacity for production and the efficiency of their production, in their capital replacement and expansion, and in their needs for investment funds. Balance-sheet data on mineral deposits, agricultural and urban land, timber tracts and the like are valuable in dealing with problems of the availability and exploitation of these natural resources and other aspects of their management.

1.4. Statistics of balance-sheets are also in increasing demand in order to measure, assess and analyse the economic strength and well-being of nations, enterprises and households and the distribution of wealth in and among nations. The stock of man-made and natural resources of a nation delimits its capacity to

produce and is a determining factor in its comparative advantages in international trade. The foreign debts and credits of a nation are indicators of its degree of dependence on or of independence from external finance and its international liquidity. The balance-sheets of enterprises may be put to similar uses. Household holdings of financial assets and liabilities are indicative of households' financial security and affect their consumption behaviour. Their stocks of consumer durables are important aspects of their level of living.

### Areas of use of balance-sheets

#### Personal wealth

1.5. One area where the need for figures on the levels of financial assets and liabilities has been evident is in studies of the factors determining personal consumption and saving. Consumption and savings functions have often included a variable on wealth. An illustration of the need to take account of wealth is the likelihood that individuals holding large amounts of corporate securities will increase their consumption when share prices rise sharply. Since the stocks of durable consumer goods of households and the deterioration and obsolescence of these goods affect households' purchasing patterns, data on these stocks are needed, also, in delineating consumption functions. Further, balance-sheet statistics on households are needed in order to assess the distribution of wealth among them and their financial liquidity and behaviour and their levels of living.

#### Money and quasi-money

1.6. Another area where there is an obvious need for figures of holdings is in monetary analysis and policy-making. For a full analysis, a range of statistical series is needed because "money" is not simply defined. A spectrum of liquid assets, starting with currency in circulation, continuing with transferable time and savings deposits and ending with short-term assets, such as negotiable time certificates of deposit and bills, may be considered "money" or "quasi-money". These assets may be in national currency or foreign currency and may be held by a number of different institutions. Those concerned with the role of money need comprehensive and detailed data in order to develop useful definitions of "money" or "quasi-money". Comprehensive balance-sheets would meet this need and, in standard form, would facilitate international comparisons.

#### Ratios involving levels

1.7. Balance-sheets are also needed for purposes of computing widely used ratios that involve figures of the level of items. Banks and other financial institutions, for example, observe specific liquidity or reserve ratios; their behaviour therefore cannot be understood or forecast without using balance-sheet data. Non-financial corporations also pay heed to certain ratios, for instance, liquid assets in relation to turnover and current assets in relation to current liabilities. Analysts often wish to test a number of other relationships between balance-sheet items in investigating the condition and behaviour of enterprises. It is interesting to note that stock market studies make extensive use of ratios.

### Portfolio-type adjustment models

1.8. Changes in balance-sheet items may sometimes be interpreted by using portfolio-type adjustment models. For example, if an institutional sector desires a given optimum portfolio of investments, it will engage in financial transactions in order to maintain that portfolio when the pattern of its holdings changes. This may be brought about by a change in the market value of a given financial asset or by accumulating saving, initially in the form of increases in liquid assets.

### Studies of tangible durable assets

1.9. Figures for holdings of fixed assets may be used in studies of production, for example, fitting production functions, computing capital-output ratios, measuring total factor productivity or assessing capacity to produce. For these purposes, the figures of fixed assets should be classified by the kind of economic activity of the establishments using the assets and not by the institutional sectors of the enterprises owning them; and perhaps the figures should be valued differently. As is indicated in the preface, this topic falls outside the scope of this publication. The fixed assets of institutional units are dealt with here primarily from a financial point of view. Data on the stocks of fixed assets owned by the institutional units are wanted in studies of their investment behaviour and needs for financing. Balance-sheet figures on the mineral deposits, land, timber tracts and similar natural resources owned by institutional units are of interest for purposes of monitoring the availability and exploitation of these non-reproducible resources and formulating environmental policies.

### Analysis of stockbuilding

1.10. Data on the level of stocks are obviously needed in studies of stockbuilding in relation to financing and in relation to production. For example, there is a correlation between the level of stocks on the one hand and borrowing from banks or other financial institutions on the other. Moreover, ratios of stocks to output and to purchases of intermediate goods are of interest in assessing economic conditions and in formulating production and purchasing plans.

### National wealth and international comparisons

1.11. Balance-sheet figures may be used to analyse the structure of a nation's wealth and to compare it with the structures of other countries. One general measure of financial structure which has been developed for this purpose is the "financial interrelation ratio". This measures the ratio of total financial liabilities outstanding to the total value of national wealth or to total tangible assets. Another measure that is considered important in financial analysis is the ratio of the market value of corporate stock to the adjusted book value. Because institutional sectors customarily differ in their reliance on outside finance as against retained savings, the relative shares of institutional sectors in the ownership of national assets (non-financial plus financial) are important in explaining differences in the structure of national balance-sheets. The role of financial institutions in providing outside finance is also of interest as their intervention leads to the issuing of two financial claims instead of one claim when lender and borrower deal with one another directly.

1.12. Data on the level as well as on the composition of a nation's tangible and financial wealth are also of considerable interest. These data furnish indicators of the economic resources and financial liquidity of a nation. They also are wanted for such purposes as assessing the external debtor or creditor position of a country. For some of these uses, figures of the stocks of tangible assets and net foreign debt or credit may be sufficient.

#### Uses of reconciliation accounts

1.13. For most of the purposes that have been mentioned above, it will be helpful and sometimes essential to have reconciliation accounts in order to explain the differences between the changes in balance-sheet items and the transactions in capital finance accounts. In many cases, it is necessary to pinpoint changes in balance-sheet items in order to explain transactions.

1.14. If transactions occur as a result of increases in the value of holdings of assets, say because of higher equity prices, holders spend more or restore the altered pattern of their portfolios. It is important to document the revaluation. Figures of revaluations will also assist in analysing the differential effects of inflation on various types of assets and liabilities and on the well-being of various institutional sectors.

1.15. The reconciliation accounts furnish data on the additions to and depletions in known reserves of mineral deposits and on the natural growth and destruction of standing timber. They reveal certain aspects of the deterioration of the natural environment and give information on the obsolescence of fixed assets.

1.16. The reconciliation entries will also provide information on the extent to which institutional units shift from one sector to another or are consolidated or broken up. Figures for revaluations will assist in analysing differences in the effects of inflation on various types of assets and these effects will help explain differences in financial interrelation ratios between countries.

#### Assistance in the compilation of national accounts

1.17. Balance-sheet and reconciliation accounts will be of assistance in work on the transaction accounts of the national accounts. The cross-checking and reconciliation of the changes in balance-sheet items with the correlated capital transactions should improve the reliability and accuracy of both sets of data. Valuable for the purpose of cross-checking and reconciliation will be the collection of reports from institutions linking profit and loss and balance-sheet figures on depreciation and net worth and coupling transactions and changes in balance-sheets in the case of assets and liabilities. The cross-checking and reconciliation of the two sets of data may also help in the understanding of and the reduction of any statistical discrepancy in the derived figures of net lending (net borrowing) between the upper and lower panels of the capital finance accounts of SNA. Net lending is equivalent in the case of the upper panel to the sum of saving, depreciation and capital transfers less the sum of gross capital formation and net purchases of land and intangible non-financial assets and in the case of the lower panel to the sum of transactions in financial assets less the sum of transactions in liabilities. Comparisons between holdings of financial assets and liabilities and property incomes received and paid out may be of value in detecting missing data in respect of these items.

## Chapter II

### PLACE OF BALANCE-SHEETS IN SNA

#### Purpose of the guidelines

2.1. The guidelines in this report present a comprehensive set of balance-sheet and associated accounts and tables which may serve as a goal for national accounting. Few countries have taken steps towards the introduction of national and sectoral balance-sheets. Furthermore, because of the differences between balance-sheets and the existing transaction accounts and because of the different statistical problems involved, even countries with advanced national accounting systems may not be able to complete their systems with balance-sheets for a number of years. Nevertheless, even an incomplete set of balance-sheet accounts, for example, for a few groups of financial institutions only, will yield useful results for understanding financial behaviour; and it is advantageous to work towards the same definitions and framework from the start. It is therefore worth while to formulate international guidelines on balance-sheet and associated accounts, sharing the experience that is thus far available.

#### Relation to transaction accounts

2.2. The concepts applicable to balance-sheet and reconciliation accounts that are linked with capital finance accounts should be considered from two points of view: first, the uses to be made of the balance-sheet figures; secondly, the incorporation of the balance-sheet and reconciliation accounts into SNA as already adopted. The uses of the balance-sheet and associated accounts have been given primary consideration in formulating the guidelines proposed in this document. In the event, however, it has proved possible to fit these accounts into the existing SNA without difficulty; there are only a few instances where the entries in the capital finance accounts do not dovetail exactly with the proposed balance-sheet data. There are a few other cases where elaboration of the classifications and definitions of SNA is necessary. These instances are dealt with in various parts of the present publication. While the SNA report does not provide full definitions and classifications for balance-sheets or a full discussion of the valuation of these items, it does demonstrate how balance-sheets fit into the framework of the national accounts.

#### General character of balance-sheets

2.3. The balance-sheet accounts are statements of tangible assets and intangible non-financial assets owned by the various institutional sectors of the economy and of the outstanding financial claims between institutional units. The SNA report recommends a common basis of valuation for these items - at market prices. For any one sector, the total value of all assets held less the total value of financial liabilities and share capital is called "net worth". Thus, in the illustrative tables given in the SNA report, corporate equity securities are included with the liabilities of the issuing sectors. It follows that the

balance-sheet for each sector balances in the sense that the sum of its net tangible assets, non-financial intangible assets and financial assets is equal to the sum of its liabilities, share capital and net worth.

2.4. These concepts are best demonstrated by reproducing in table 3.1 an illustrative table from the SNA report (table 2.15 of SNA). It should be noted that in the balance-sheets of the individual sectors and in their summation financial assets do not equal liabilities and that net tangible and intangible non-financial assets are therefore not equal to net worth. For all institutional sectors, that is, for the nation as a whole, total net worth - often called "national wealth" - is equal to the sum of net tangible and intangible non-financial assets and financial claims on non-residents less the sum of financial liabilities to non-residents and domestic shares held by non-residents: in table 3.1,  $661 + (31 + 51 + 115) - (52 + 36 + 77) = 693$ . Therefore, for a complete picture, it is necessary to include columns for the rest of the world, containing as financial assets claims on residents held by non-residents and, as liabilities, claims on non-residents held by residents. These columns furnish a consolidated balance-sheet for the rest of the world, showing the links between the rest of the world and the country in question.

2.5. In accordance with the principles adopted in paragraph 7.84 of the SNA report, there are no figures for non-residents' holdings of net tangible assets in the balance sheet of the rest of the world. Non-financial assets, such as land bought by a non-resident, are treated as owned by a nominal resident institution; the non-resident holds a financial asset in the form of the equity of the nominal resident institution. Similarly, residents' holdings of real estate abroad are treated as holdings of financial assets.

2.6. Once columns have been included for the rest of the world, the sums of the columns are identical on the asset and liability sides of the balance-sheet. Thus the total value of each type of financial claim held as an asset is equal to the total value issued as a liability; the total of financial assets equals the total of financial liabilities and share capital; and the total value of net tangible and intangible non-financial assets is the same as total net worth.

2.7. It should be emphasized that these identities exist only on the assumption in SNA of a common valuation of financial claims held as assets and issued as liabilities. The entries in the illustrative tables of the SNA report are at current market prices or, in the case of tangible fixed assets, at replacement cost. The SNA report stresses, however, that other values may be important and can be incorporated into the system.

2.8. In the SNA report share capital, valued at market prices, is included with liabilities; incorporated enterprises are then left with an independent net worth. This matter is discussed in chapter III of this paper, where it is proposed that this concept of independent net worth should be retained in balance-sheet accounts.

2.9. In the SNA report it is assumed that changes in balance-sheet figures between one date and the next could be completely explained by net accumulation and revaluations. Experience has shown that there will be other changes as well; and that there is need for a "reconciliation account" instead of a "revaluation account" between opening and closing balance-sheet entries to explain the changes in terms of the transactions of the capital finance accounts, revaluations and adjustments. This reconciliation account forms the subject of chapter VII of this paper.

Table 3.1. Balance-sheet accounts

	Non-financial enterprises	Financial institutions	General government	Households	Private non-profit institutions	All institutional sectors	Rest of the world	Total
Financial assets								
Currency and deposits	23	68	12	170	2	275	52	327
Securities	32	153	9	250	13	457	36	493
Other	126	120	125	144	2	517	77	594
Net tangible and non-financial intangible assets	304	18	133	193	13	661		661
Total	485	359	279	757	30	1 910	165	2 075
Financial liabilities, share capital and net worth								
Currency and deposits	8	184	103	1	0	296	31	327
Securities	235	62	145			442	51	493
Other	151	102	141	82	3	479	115	594
Net worth	91	11	-110	674	27	693	-32	661
Total	485	359	279	757	30	1 910	165	2 075
Non-financial enterprises								
Financial institutions								
General government								
Households								
Private non-profit institutions								
All institutional sectors								
Rest of the world								
Total								

## Chapter III

### NATIONAL WEALTH AND NET WORTH

#### Scope of national wealth

3.1. National wealth, that is the total net worth of any one country, may be defined in two ways. First, as is noted in paragraph 2.4 above, it is the total of the various kinds of net tangible and intangible non-financial assets of residents, plus financial claims on non-residents, less financial liabilities to non-residents. Secondly, as table 3.1 shows, the same total may be obtained by adding together the totals for the net worth of each of the resident sectors.

3.2. Problems concerning the scope of the national wealth arise in the case of tangible goods and intangible non-financial items; there are no doubts concerning the inclusion of financial claims. In resolving these questions account should be taken of at least three criteria. One consideration is the nature of and the benefits from the item relative to the concept (notion) of national wealth and the purposes for which statistics of national wealth are wanted. The conceptual and practical problems and difficulties of measuring the value of the items included constitute the second criterion. The third consideration is the necessity of maintaining as much consistency as is feasible with the concepts and definitions adopted for the transaction accounts of SNA.

#### Tangible reproducible goods

3.3. There is no question that the items included in gross capital formation in SNA - the fixed assets of enterprises, government and private non-profit institutions and the stocks of other reproducible goods - result from and are used in the production of goods and services. They are the subject of frequent transactions in the market and in most instances of systematic record keeping by the owners.

3.4. The tangible reproducible durable goods which Governments put mainly to military uses are not included in gross fixed capital formation in the SNA report; it is recommended that they should also be excluded from stocks of fixed assets in the balance-sheet accounts. However, items such as schools, hospitals, airfields or roads that are used mainly for military purposes may, in addition, be used for civilian purposes or may be shifted to civilian purposes entirely. Furthermore, these items do not present as great difficulties of valuation as do other types of military goods; and when the goods are transferred to civilian uses they are added in gross fixed capital formation in the transaction accounts of SNA and should be included in the balance-sheet accounts. Military equipment deteriorates and becomes obsolete rapidly. The stocks are not very important for purposes of economic analysis because they depend on other considerations, such as the international political climate and national security. Furthermore, difficulties of measuring the depreciated value of the stocks would be great because their degree of deterioration and obsolescence vary substantially, depending on technological and

political circumstances. It is considered desirable to show military durables in a supplementary table.

3.5. The durable goods of households, such as automobiles, refrigerators, washing machines and furniture, are also excluded from gross fixed capital formation in SNA. This treatment may seem anomalous since the same items, when in the possession of producers of goods and services, are considered to be fixed assets; and they do yield a stream of benefits to households over a number of years. Furthermore, possession of durable goods is an important element in the level of living of households and in their patterns of consumption and of financial behaviour. However, the benefits households derive from these goods are not included in the production of goods and services. The inclusion of durable goods in the standard balance-sheet accounts would therefore create serious problems of reconciliation with the transaction accounts of SNA. It would also raise substantial difficulties of estimating market values and depreciation in a number of cases. It is therefore considered best to omit these reproducible durable goods from the standard accounts and tables on balance-sheets. However, it is desirable to include a supplementary table on household holdings of consumer durables in the system.

#### Tangible non-reproducible goods

3.6. Tangible non-reproducible durables, for example, land, timber tracts, subsoil deposits and fisheries used in the commercial production of goods and services, are dealt with in the transaction accounts of SNA only when sold and purchased. Natural resources in the public domain, such as rivers, lakes, roads, parklands, unused wilderness and the atmosphere, which are not subject to ownership rights and which are generally not sold (purchased), are not taken into account at all. Outlays on the permanent improvement and extension of the aforementioned non-reproducible items are covered in the gross capital formation of SNA, either under "land improvement" or "other construction except land improvement". Such outlays are, in general, not made on unused wilderness or in the atmosphere. Historical monuments, artifacts and objects are also covered in the transaction accounts of SNA only when sold and purchased.

3.7. While all of the non-reproducible tangible assets listed above are part of the natural or man-made endowment of a country and yield benefits over an extended period of time, it is the stream of benefits from and the value of only the tangible non-reproducible resources which are used in the commercial production of goods and services that are generally priced in the market place. It therefore becomes feasible to value these assets. In addition, the goods and services flowing from their use are included in production and the capital outlays on their improvement and extension are counted as capital in the transaction accounts of SNA. As a result, it is proposed that these tangible non-reproducible assets should be covered in the balance-sheet accounts. Primarily because of the conceptual and practical difficulties of valuing the tangible non-reproducible assets in the public domain, as well as the benefits they yield over an extended period of time, it is proposed that these resources as such should be excluded from the balance-sheet accounts. However, construction work for the permanent improvement and extension of these assets, such as dikes, breakwaters, dams, roads, pavilions, land clearance for parklands, should be included in the balance-sheet accounts as reproducible tangible assets. In order to facilitate the valuation of historical monuments, artifacts and art objects, only those that have been purchased (sold) are to be covered in the balance-sheet accounts.

### Intangible non-financial assets

3.8. Intangible non-financial assets are, by nature, difficult to define; it is more a question of establishing conventions. Two types of assets that might conceivably be included are human capital and the store of scientific knowledge. If they were to be included in national wealth, a significant part of what are considered current expenditures in the SNA report would become capital outlays. The expenditures in question are outlays such as those on education and training, on medicine and health and on research and development. There has been at least one attempt to measure these intangible resources of human capital and stored-up knowledge. <sup>1/</sup> However, the conceptual and practical difficulties of identifying and measuring the aspects of these outlays which may be considered to be part of accumulation are considerable and the usefulness of doing this is, in some cases, questionable. For example, these outlays may consist of variable mixtures of short-term (consumption) and long-term (capital) benefits which it is very difficult to disentangle; the correlations between the long-term benefits and the outlays are often not great; the acquired knowledge and skills may become obsolescent. These types of resources are therefore omitted from the standard balance-sheet accounts. To some extent, such assets enter into private accounts as "goodwill"; this is discussed in paragraph 5.7 below, where it is concluded that "goodwill" should not be included in the balance-sheets.

3.9. The only intangible non-financial assets that it is proposed should be covered are those included in the transaction accounts of SNA. These assets consist of patents, copyrights, trade marks, leases in respect of land and buildings and exclusive rights and concessions to exploit mineral deposits, fisheries and timber tracts. In the SNA report, these intangible non-financial assets are included only when they are purchased (sold); they are not accounted for at the time they are created. A similar approach is proposed in the balance-sheet accounts in the case of patents, copyrights and trade marks. The cost of purchases furnishes the values to be assigned to these assets. In the case of leases and the exclusive rights to exploit mineral deposits, fisheries and timber tracts, the approach proposed in the balance sheets differs from that in the SNA report. In essence, it is suggested that such rights, if long-term, should be considered to represent a share of the current market value of the land, buildings, mineral deposits etc. if the periodic rents, royalties or similar payments for them are significantly less than the current going rates. (See para. 5.15 for fuller discussion of this matter.)

### The net worth of sectors

3.10. A corporation is owned by its shareholders. Therefore, in a sense, the whole of the corporation's assets, less its liabilities to third parties, belongs to its shareholders. If this principle were to be adopted in balance-sheets, corporations would not have independent net worth and the net worth of the other sectors, especially households, would be higher.

3.11. The same sort of argument might be made in the case of general government, which is "owned by the voting population and whose debts, in the extreme, might be

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<sup>1/</sup> John W. Kendrick, "The treatment of intangible resources as capital", The Review of Income and Wealth, Series 18, No. 1 (March 1972).

paid by, say, a general tax. Governments usually have negative net worth, which might be attributed to households. All national wealth would then be attributed to households.

3.12. While there is logic behind the argument above, it is necessary to see whether it results in the most useful way of presenting statistical data for use in analysing behaviour. From the point of view of households, this is not so. Households value their shares in terms of the amount for which they could be sold, that is, market value, and not in terms of the net worth of the corporations involved. The households behave as though they were creditors rather than owners of the corporation; they pay attention to their ownership rights to the underlying net assets only when the corporation is being liquidated. Still less do they consider that, as individuals, they might at some time be liable to pay their share of the national debt.

3.13. This leads to an important principle of sectoral balance-sheets: the accounts are designed to measure the sum of the holdings of the individual units which make up the sector, not the collective wealth of the statistical abstraction called a "sector". Studies of the balance-sheets concern the pattern of behaviour of the independent units, not that of the sector as an entity. Collective wealth, that is, wealth which might be attributed to a group of units but which cannot be appropriated by any one unit, does not affect their behaviour and is therefore not to be counted as their financial assets. This means that corporations retain an element of independent net worth. This independent net worth, which can only be appropriated by the individual shareholders through a liquidation or takeover, is the counterpart of the retained saving described in paragraph 7.71 of the SNA report.

3.14. Turning to the behaviour of the corporation, there is a marked distinction between its issued capital and its retained saving. If finance is needed, say for fixed investment, the corporation may use either internal finance or external finance. Internal finance, that is, use of retained saving, will leave the total of assets and the total of liabilities and net worth unchanged but will result in a change in the mixture of the assets. External finance through a new issue of shares will result in increases in the total of assets and in the total of liabilities and net worth. Even more important aspects of the differences between internal and external financing are the differences in their impact on the assortment of liabilities and assets, on the distribution of the net income, on the pricing policies of the corporations and on capital markets. It is therefore important that share capital and net worth should appear separately in sectoral balance-sheets.

3.15. The net worth of corporations will include various reserves and provisions, such as amounts set aside for depreciation and tax reserves. Corporations do not view these reserves as belonging to shareholders; in fact, banks and certain other financial institutions have sometimes been allowed to have "hidden reserves". The place of these various reserves in balance-sheet accounts is discussed in paragraphs 5.4 through 5.6 below.

3.16. There may, of course, be occasions when it will be useful to combine the corporations' net worth with its share capital as liabilities to shareholders. There will be no difficulty about this since the excess of assets over the sum of liabilities and share capital may be easily added to the figures for share capital.

3.17. Individual shares in the equity of most private non-profit institutions are not conceivable; such institutions have an independent net worth.

## Chapter IV

### CLASSIFICATION OF INSTITUTIONAL SECTORS

4.1. This chapter is concerned with two main topics: the definition of the statistical unit for balance-sheet purposes and the grouping of these units into institutional sectors. The first section deals first with the suitability of three types of transactor units for purposes of balance-sheet data - establishment-type units, legal units and families of legal entities; and it contains, secondly, a discussion of the problem of classifying holding companies and trust properties according to institutional sector. The second section turns to the purposes of the classification of institutions into sectors and subsectors and concludes that the classification in the SNA report is suitable for balance-sheets though it is often not detailed enough. Further subdivisions of sectors cannot, however, be standardized, because of wide variation in financial structure from one country to another.

#### The statistical unit

##### The SNA recommendations

4.2. Two main classes of transactors are distinguished in chapter V of the SNA report. First, there is a class of transactors for purposes of compiling data on the flows of goods and services in the production, consumption expenditure and capital formation accounts. In this case the major interest is in the operating decisions in respect of production; work-place or establishment-type units are therefore needed. The second class of transactors is needed for dealing with the financial flows of the income and outlay and capital finance accounts. Here, the concern is with the units, often consisting of a number of establishment-type units, which make financial decisions, such as the disposition of income, the accumulation of property and its finance, and borrowing and lending.

4.3. For corporate and quasi-corporate enterprises, these units are ideally "statistical units consisting of families of incorporated or quasi-corporate enterprises which, as a result of ties of ownership, are controlled and managed by the same interests" (SNA, para. 5.61). These families are defined as those where 50 per cent or more of the equity of each legal entity is owned by the same interests. For general government, the desirable and practicable statistical units under discussion are the organs of general government, for example the central government as a whole, the various state, provincial or local governments and the individual social security schemes; each organ also constitutes a separate legal entity in many instances. The private non-profit institutions included in the subsectors of general government because they are wholly or mainly financed and controlled by organs of government should be treated as separate statistical units. For private non-profit institutions serving households, the unit is, in general, the legal entity. It may, however, be desirable in certain instances to combine private non-profit institutions controlled by the same interests into a single statistical unit. For households, the practical units in question are each household plus the incorporated enterprises owned by its members, which together make up a legal entity.

4.4. The use of the family of legal entities in the income and outlay and capital finance accounts of incorporated and quasi-corporate enterprises is however qualified in four ways. First, it may not always be feasible to identify the families of entities or to compile consolidated data for them. In these circumstances, the units will be limited to those legal entities of the family for which consolidated accounts are available. Secondly, the use of statistics for families of enterprises will reduce the usefulness of certain compilations, for instance, those organized according to kind of economic activity. It is then necessary to use the institutional unit "of narrowest scope which receives and disburses incomes and buys and sells property and which always has complete profit-and-loss and balance-sheet accounts" (SNA, para. 5.62). This is, for incorporated enterprises, the legal entity, which may consist of a number of establishments. Thirdly, if the family of legal entities consists of financial and non-financial enterprises, it will be essential to use at least two statistical units in order to include each group of enterprises in the separate institutional sectors. The fourth qualification to the use of the family of entities is a very important practical one; profit-and-loss and balance-sheet accounts are, in some countries, generally available for individual legal entities only (SNA, para. 5.63). Then the practical statistical unit is the individual legal entity.

#### For balance-sheets of institutional units

##### Advantages of the family of entities

4.5. In the case of incorporated and quasi-corporate units, the family of legal entities is recommended for use in the income and outlay and capital finance accounts of SNA because of the interest in the units where financial decisions are taken. In a commonly owned group of corporations, finance is very likely controlled from the centre. Frequently, if finance is needed by a subsidiary company for, say, fixed investment, the parent company makes a capital issue and passes the proceeds to the subsidiary in exchange for shares. The decision to do this takes into account the circumstances of all members of the group. It might equally have been decided that another subsidiary company, which had a good year, should transfer less of its profit to the parent unit and make a loan to the first subsidiary.

4.6. The financial links between members of a family of corporations are therefore often meaningless for purposes of analysis. Funds are shuffled among members of the group and loans are made without intention of repayment. The financial links between them may be designed to "window-dress" the balance-sheet. Entering these formal financial assets and liabilities in sectoral balance-sheet accounts is more likely to be confusing than helpful in analysing the data.

4.7. Moreover, the intra-family transactions may contribute to the compilation of erroneous figures. This is because, in countries where it is impossible to obtain consolidated accounts for families of legal entities, the individual units are usually permitted to have different balance-sheet dates and the data from balance-sheets relating to various dates are obviously different from the data from the balance-sheets for the same date. This problem may arise even in the case of balance-sheet data gathered in special returns if, for practical reasons, companies are allowed to use their normal accounting dates.

4.8. For general government, the SNA report recommends that the organs of government should be used as statistical units because the finance of and expenditure on their ministries and departments, on government enterprises not considered to be quasi-corporate and on other units are jointly determined and controlled. There may be many book-keeping entries on debits and credits between these units which have no economic or financial significance. Furthermore, the organs of government are likely to be the only practical units for the compilation of the financial data of the income and outlay, capital finance and balance-sheet accounts.

4.9. Financial decisions in respect of household activities and unincorporated enterprises included in the household sector are usually made jointly and financial assets and liabilities are pooled and used in common, in fact as well as legally. Furthermore, the available balance-sheets and related records on these assets and liabilities will, in most instances, not separate the household and its various unincorporated enterprises from one another.

#### Disadvantages of the family of entities

4.10. The major disadvantage of adopting the family of legal entities as the standard statistical unit for incorporated and quasi-corporate enterprises is that it is not a practical unit in a number of countries. In countries where the fiscal and other regulations call for balance-sheets for the individual legal entities only, it may not be possible to compile figures for the families or even to identify them.

4.11. Secondly, a family of entities often covers a wide range of economic activity. Thus, it sometimes includes both financial and non-financial enterprises. In such cases it is not desirable to use the family of entities as the statistical unit. The legal entities in different institutional sectors should be treated as different statistical units; where there are branches and subsidiaries abroad, these will, as in the SNA report, be included in the rest of the world. As the use of the family of legal entities in classifications of non-financial enterprises according to kind of economic activity will often limit the usefulness of making the classification, the individual legal entities may be used for this purpose.

#### The ideal: the family of legal entities

4.12. Despite the difficulties mentioned above, it is considered that the family of entities is, in principle, the main statistical unit which should be used in sectoral balance-sheets. In countries where for fiscal purposes balance-sheet data are required for the family as a whole, this will not present difficulties. However, other countries may find that the practical statistical unit for purposes of balance-sheet data is the legal entity only. The exception to this recommendation is that when the family consists of entities falling into different sectors or subsectors they should be divided into statistical units according to these differences in classification. This does not preclude the use of the legal entity as a supplementary unit in tabulating balance-sheet data according to kind of economic activity. In any case, the same statistical unit or units should be used in balance-sheet accounts and in capital finance accounts.

4.13. Certain kinds of international comparisons of balance-sheet data, for example, comparisons of financial structure, will be affected by differences in

the statistical units used. It is therefore suggested that countries using the legal entity only should, if possible, comment in notes to their balance-sheet accounts on the extent to which the use of these units, instead of families of entities, affect the figures. It would also be desirable for them to correct the balance-sheet data for the effects of "window-dressing".

4.14. It is convenient at this juncture to state a general principle that follows from the use of the family of legal entities as the statistical unit in balance-sheet accounts. This is that the financial links between the members of each family that make up the same statistical unit, but not those between different families and other independent units, should be consolidated out. Since the entities of a family that fall into different institutional sectors or subsectors are to be treated as separate transactor units, their financial links should, in general, not be consolidated out.

### Problem cases

#### Holding companies

4.15. Problems of assigning holding companies to institutional sectors or subsectors arise when they have subsidiaries which fall into more than one of them. It is suggested that, in general, the holding company should be allotted to the sector or subsector of the subsidiaries in which it holds the most assets. It will, however, be desirable to make exceptions to this general rule. For example, for a holding company with two subsidiaries, the larger of which is a commercial bank, it would not be desirable to classify the holding company with banks because it is unlikely to behave like a bank; for example, it is not required to hold certain reserves. It is suggested that such a holding company should be assigned to a separate category of the subsector "other financial institutions" shown in table 5.1 below. Holding companies that do not clearly belong elsewhere may also be assigned to that special category.

#### Trust properties

4.16. In certain countries a large amount of wealth is under the control of trustees. Guidance is therefore needed concerning the delineation of the statistical unit and the sector to which these assets should be assigned. The conclusions drawn in this respect are relevant to the transaction accounts as well as to the balance-sheets of SNA.

4.17. Personal trusts. Property held in personal trusts belongs legally to individuals but is administered by trustees who may be either groups of individuals or corporate bodies. The property cannot be disposed of by the persons who receive the income from it, that is, the life tenants. While trust property is not owned outright by any person until the trust is terminated, at which time the property reverts to named individuals, it is definitely not held by the trustees, who are only acting as agents. The property should therefore be included as part of the wealth of the legal owners, who are to be classified in the household sector.

4.18. Trustees with very limited powers. In the case of mutual organizations such as trade unions, friendly societies and sometimes pension funds, the powers of trustees are often very limited. The trustees' function only is to ensure

that the elected or appointed officials follow the rules of the organization in dealing with its property. The property obviously belongs to the organization.

4.19. Other trusts. Described below are differing characteristics of a large number of trusts established for educational, religious or charitable purposes.

(a) In many cases a trust has its own trustees and operates independently of other trusts. The trust itself is then the statistical unit and should be classified as a private non-profit institution serving households.

(b) Educational, religious or other bodies are often trustees for a number of different trusts: for example, a college acting as trustee for a number of scholarship funds or a religious body acting as trustee for a number of charitable funds. As long as the trustee is itself a non-profit institution, the appropriate statistical unit is the non-profit institution, including any trusts for which it is the trustee.

(c) When the trustee is not itself a non-profit institution, for example, the central government, a local government or a corporate enterprise, excepting a specialized corporate trustee, the appropriate statistical unit is the group of trusts under a single trusteeship. There will be no links to show between the group of trusts and the trustee as he does not have rights of ownership. The logic of grouping the individual trusts into a single unit is reinforced by the fact that it is now common practice in some countries for bodies to combine the investments of all trusts under their trusteeship into a common pool; they then allocate each trust a proportionate interest in the amalgamated fund.

It would be useful to elaborate the discussion in SNA of the statistical unit for, and the composition of, private non-profit institutions serving households in accordance with the above principles.

#### The institutional sectors

4.20. The aim in classifying statistical units into institutional sectors is to group together units that are sufficiently homogeneous in respect of kinds of liabilities incurred and in respect of kinds of assets held for the analysis of their combined balance-sheets to be meaningful. Of course, as the number of categories increases, the degree of homogeneity becomes greater.

#### The classification in SNA

4.21. The institutional sectors and subsectors of the SNA report are suitable for purposes of balance-sheets. The classification is given, with explanatory notes, in table 5.1 of the SNA report. The items of the classification are repeated for convenience in table 4.1.

4.22. It is recognized that many countries may be unable to compile sectoral balance-sheets in the near future for all the categories of table 4.1. It is more likely that balance-sheets could be compiled for certain financial institutions and for central government than for other institutional categories. The way in which a system of balance-sheets might be built up, sector by sector, is discussed in paragraphs 9.39 through 9.51 below.

Table 4.1. Classification of institutional sectors and subsectors

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1. Non-financial enterprises, corporate and quasi-corporate
    - (a) Private enterprises
    - (b) Public enterprises
  2. Financial institutions
    - (a) The central bank
    - (b) Other monetary institutions
    - (c) Insurance companies and pension funds
    - (d) Other financial institutions
  3. General government
    - (a) Central government
    - (b) State and local government
    - (c) Social security funds
  4. Private non-profit institutions serving households
  5. Households including private non-financial unincorporated enterprises
    - (a) Households headed by an owner of unincorporated or quasi-corporate enterprise
      - (i) Primarily engaged in agricultural activities
      - (ii) Primarily engaged in non-agricultural activities
    - (b) Households headed by an employee
    - (c) Persons in other status and small social clubs
      - (i) Households headed by an inactive person or an inmate of an institution
      - (ii) Small social clubs
-

## Non-financial enterprises

4.23. It is important that non-financial enterprises should be subdivided into private and public enterprises in view of the differences in their sources of finance and management. Some countries may also find it useful, if feasible, to distinguish enterprises that are primarily foreign-owned from those that are mainly nationally owned. The distinction should be based on whether 50 per cent or more of the equity is owned by non-residents or by residents.

4.24. Classification of non-financial enterprises according to size is also likely to be of value in studying their financial behaviour and formulating financial policies. Countries may be able to prepare such classifications as a by-product of the way in which they compile balance-sheet data.

## Financial institutions

4.25. In view of the differences in financial role and behaviour between the institutions falling into the category "other financial institutions" and those falling into the category "other monetary institutions" and in view of the importance of these institutions, each of the two categories should be subdivided in a number of countries. Because of the diversity of these financial institutions, it is not feasible to suggest a standard way of subdividing the two categories. In conformity with the recommendations of the SNA report, each of the subsectors of financial institutions should be subdivided into private and public bodies. As in the case of non-financial enterprises, some countries may consider it desirable to distinguish financial institutions which are primarily owned by residents from those which are mainly owned by non-residents.

4.26. In general, the balance-sheet data of the statistical units for financial institutions should be combined to compile the accounts and supporting tables of the sector and its subsectors. Combination is needed for such purposes as analysing the liquidity and portfolio behaviour of, and links between, the financial institutions. In addition, it is desirable to consolidate balance-sheets of the institutions for such purposes as portraying the role in the economy of the financial institutions as a whole and, in the absence of other data, the holdings of financial assets and liabilities by the rest of the economy.

## General government

4.27. Some countries may find it desirable to raise a subsector for the private non-profit institutions serving households, enterprises and government which are to be included in general government. Some of these private non-profit institutions may be jointly financed by more than one level of government and at least part of their financing, in particular of capital outlays, may come from private bodies or individuals. Then only the transfers they receive from organs of government will be covered in the accounts of the organs of government.

4.28. In paragraph 5.68 of the SNA report it is stated that for "income and outlay and capital finance accounts, the organs of general government, for example, the central government as a whole, the various state, provincial and local governments, and the individual social security schemes, should be used as transactor units". However, in certain supporting tables (for example, table 22 of SNA on the outlay

and capital transactions of general government by purpose), the transactions are to be consolidated in order to show transactions between general government and the rest of the economy.

4.29. For balance-sheet purposes it is preferable to retain the recommendation for the SNA transaction accounts and, in general, not to consolidate the figures for the various parts of government. While it is true that the central government often has some say in the expenditure and financing of local government, local governments are often left with a choice, though circumscribed in certain cases, as to their way of raising finance. The degree of financial independence of local government varies from one country to another. None the less, it may be useful for such purposes as portraying the financial relationships between general government as a whole and the rest of the economy to show consolidated balance-sheet data in supplementary tables. The financial links between central governments and local governments that are shown in balance-sheets will mainly consist of short- and long-term loans.

4.30. Countries may encounter difficulties in compiling unconsolidated balance-sheets for general government when there are projects jointly financed by central and local governments. It is not feasible to furnish specific guidance for such cases since much depends on the individual circumstances (whether there is an income, to whom it accrues etc.); a division of the assets and liabilities in respect of the joint projects may, in certain cases, be based on their relative shares in the original costs of the project.

4.31. In some countries, the financial operations of the entire public sector (general government, local government, non-financial and financial public enterprises, sometimes even including certain activities of the central bank) are combined to show separate balance-sheets for public and private enterprises and to delineate the links between the units of the public sector. The way in which the public sector's finance is managed should, in addition, be explained in notes to the tables.

#### Households, including non-financial private unincorporated enterprises

4.32. As in the transaction accounts of SNA, it should be advantageous, if feasible, to classify the balance-sheet data of this institutional sector into the limited number of subsectors suggested in table 4.1 in order to bring out the major patterns of investment holdings and behaviour. There are substantial differences in the assortment of assets and liabilities held by - and thus the liquidity of - households of owners of agricultural and non-agricultural unincorporated and quasi-corporate enterprises, households of employees, households of inactive persons and institutional inmates and small social clubs. The magnitudes and patterns in which they accumulate and draw down capital and borrow funds also differ.

## Chapter V

### CLASSIFICATION OF ASSETS AND LIABILITIES

5.1. This chapter deals with the scope of, as well as schemes of classification for, tangible, intangible and financial assets and liabilities for use in balance-sheet and reconciliation accounts. The classifications proposed take into account the analytical purposes for which the data are wanted, the practical possibilities of distinguishing the various kinds of assets and the various kinds of liabilities, and the differences between them in mode of valuation. The proposed schemes of classification are on the whole the same as but in some cases more detailed than those of the SNA report.

#### General considerations

##### The main types of assets

5.2. The various types of assets fall into the two main categories already distinguished in the SNA report - on the one hand, tangible and non-financial intangible assets and, on the other, financial claims. In the case of financial claims but not of other types of assets each asset of a transactor is the liability or the share capital of another transactor. Tangible assets are classified into those that are reproducible and those which are non-reproducible.

##### Scope

5.3. Certain assets and liabilities which frequently appear in balance-sheets in business accounting do not qualify for inclusion in national and sectoral balance-sheets.

##### Provisions and reserves

5.4. In business and similar accounting, sums are often set aside to provide for certain needs in the future. These may be in respect of transactors' future liabilities, either certain or contingent, or in respect of their future expenditures. In either case the actual magnitude of the future liabilities or expenditures of the transactors are unknown and the counterpart entries to these future liabilities or expenditures will not appear in the accounts of other transactors; the provisions should therefore not be included in the national or sectoral balance-sheets.

5.5. Examples of provisions for future liabilities that commonly appear in balance-sheets in business and similar accounting but that should not appear in national and sectoral balance-sheets are "provisions for future taxation" when the amount actually due has not yet been established, "provisions for pension liabilities" though they have not been determined actuarially, sinking funds for the future redemption of bonds and other loans and "provisions for bad and doubtful debts" though not yet defaulted. Figures for these "provisions" are, however, useful in the analysis of the financial health of enterprises or other units in question. For example, the amounts set aside as reserves for the future payment of taxes and

dividends are important in assessing corporate liquidity; and the provisions made for bad debts as compared to actual defaults of payments are of assistance in evaluating future profits. It is therefore advantageous to record data on provisions or reserves for these items in notes to the data of national and sectoral balance-sheets. Notes on provisions for contingent liabilities, such as bankers' acceptances, are also worth while.

5.6. An example of setting aside funds for future outlays in business and similar accounting is the establishment of provisions for depreciation. This reserve, like the other provisions and reserves discussed in this section, represents an allocation of accumulated saving; this should be included in the equity of the unit, for example, net worth plus value of the shares of stockholders in incorporated enterprises. The corollary of this approach is to record fixed assets on a gross basis; in the sectoral and national balance-sheets, they are also to be valued net of accumulated provisions for depreciation. Other examples of provisions that are often made for the using up of capital items and the allocation of accumulated saving are reserves for the amortization of research and development expenditures, advertising outlays or goodwill. None of these items are treated as intangible capital assets in the national and sectoral balance-sheets.

#### Goodwill

5.7. Goodwill often appears in the business accounts of an enterprise in connexion with the purchase of other incorporated or unincorporated units. This is because the value of the net assets - not counting goodwill - capitalized research and development and advertising and similar intangibles of the purchased businesses though revalued at market values is less than the amounts paid for the businesses; the difference is entered as goodwill. It reflects the purchasers' belief that the value of the assets of the acquired businesses is low as compared to the income they are expected to generate. This may be due to good management, the development of special products and/or technologies, the customer appeal built up through advertisement etc. These represent human or other forms of capital which are not to be included in the national and sectoral balance-sheets. The amounts actually paid for the purchased businesses and the current value of their assets and liabilities are taken fully into account in the capital finance accounts and are thus reflected in the balance-sheet account.

#### Classification of tangible reproducible assets

5.8. The schemes of classification for stocks and fixed assets according to type that are given in tables 6.2 and 6.3, respectively, of the SNA report are, on the whole, suitable for balance-sheets. The categories of these classifications and the definitions, where modified for balance-sheet purposes, are set out in table 5.1. In SNA fixed capital formation includes reclamations of and improvements to land, the development and extension of plantations, orchards and vineyards, and transfer costs in respect of transactions of land, farms, plantations and the like; the same treatment is recommended for balance-sheet statistics. The following items are also treated as gross fixed capital formation in the SNA transaction accounts and they may be treated in the same way in balance-sheet statistics: (a) the sinking of oil wells and mine shafts and similar constructions and the transfer costs of transactions in mineral deposits and concessions; (b) the clearance and afforestation of timber tracts and forests and transfer costs of transactions in them; and (c) the development of fisheries and the transfer costs of transactions in fisheries. It may, however, be useful to include these items with the respective natural resources for some analytical purposes, if data permit.

Table 5.1. Classification of stocks and fixed assets according to type

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10. Reproducible tangible assets

10.1. Stocks

10.1.1. Goods-producing industries

Agriculture, forestry and logging, and fishing; mining, manufacturing, and electricity, gas and water supply; and construction.

10.1.1.1. Materials and supplies

All materials, components, parts and supplies acquired for extracting, processing, fabricating, assembling, repairing etc. commodities and for construction works; coal, oil and other fuels purchased for consumption; stocks of fertilizers, insecticides, seeds, feeds and similar goods of agricultural producers; greases and other lubricants; purchased non-durable containers, factory packaging, office and other supplies.

10.1.1.2. Work in progress

Goods that have been partially processed, fabricated or assembled by the goods-producing establishments but that are not usually sold, shipped or turned over to other establishments without further processing. Partially completed construction works are excluded.

10.1.1.3. Livestock, except breeding stock, dairy cattle and the like

Livestock raised for slaughter; all chickens and other fowl; and other livestock except those enumerated in 10.2.7 below.

10.1.1.4. Finished goods

Commodities of the goods-producing establishments, which are ready for sale or shipment by these units, including items which are usually sold by the units in the same form as when purchased. Construction works are excluded.

10.1.2. Wholesale and retail trade

Goods acquired by units classified to wholesale and retail trade for sale or for use as fuels and supplies

Table 5.1 (continued)

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10.1.3. Other industries

Stocks of coal, oil and other fuel and of repairing and maintenance supplies of the transport, communication, financial and other industries n.e.c.; non-durable containers, packaging, office and miscellaneous supplies; all other stocks of these industries.

10.1.4. Stocks of government services

Stocks of government services in strategic materials, grains and other commodities of special importance to the nation.

10.2. Fixed assets

10.2.1. Residential buildings

Buildings, completed and uncompleted, which consist entirely or primarily of dwellings. Included are permanent fixtures such as fixed stoves, central heating, air conditioning, lighting, plumbing and water-supply facilities, and all other fixed equipment customarily installed in dwellings. Hotels, autocourts and similar buildings operated for purely transient occupancy are considered to be non-residential structures.

10.2.2. Non-residential buildings

Buildings and structures, completed and uncompleted, which are entirely, or primarily, for industrial or commercial use. Examples of non-residential buildings are factories, warehouses, office buildings, stores, restaurants, hotels, garages, farm buildings such as stables and barns, and buildings for religious, educational, recreational and similar purposes. Also included are fixtures, facilities and equipment which are integral and unmovable parts of the structures.

10.2.3. Other construction works

Non-military works, completed and uncompleted, such as the permanent ways of railroads, roads, streets, sewers, bridges, viaducts, subways and tunnels, harbours, piers and other harbour facilities, car parking facilities, airports, pipelines, canals and waterways, water-power projects, dams, dikes and irrigation and flood control projects, aqueducts and sanitation projects, athletic fields, electricity transmission lines, gas mains and pipes, telephone and telegraph lines etc. Includes the cost of laying out the necessary streets and sewers, but excludes groundwork within the building line, which should be included in residential or non-residential buildings, as the case may be.

Table 5.1 (continued)

10.2.4. Land improvement and plantation and orchard development

10.2.4.1. Land improvement

Outlays on all land reclamation and land clearance, irrespective of whether it represents an addition to total land availability or not; irrigation and flood control projects and dams and dikes which are part of these projects; clearance and afforestation of timber tracts and forests; and the transfer costs of transactions in land, farms, mineral deposits and concessions, timber tracts and forests, fishing grounds and concessions, and similar natural resources.

10.2.4.2. Plantation, orchard and vineyard development

Expenditure on planting and cultivating, until they yield crops, of orchards, rubber plantations and other new holdings of fruit-bearing and sap-bearing plants which take more than a year to become productive.

10.2.5. Transport equipment

Completed ships, aircraft, railway and tramway rolling stock, tractors for road haulage, trucks, moving vans and the like, motor vehicles, carts and waggons acquired by industries, government services for civilian use and private non-profit services. Transport equipment acquired for military purposes is excluded.

10.2.6. Machinery and equipment

10.2.6.1. Agricultural machinery and equipment

Agricultural machinery and equipment such as harvesters, threshers, ploughs, harrows and other cultivators, and tractors other than for road haulage.

10.2.6.2. Other

Durable goods not elsewhere classified to the fixed assets of resident producers. Included are power generating machinery; office machinery, equipment, furniture and furnishings; art objects, metal working machinery; mining construction and other industrial machinery; cranes and fork-lift equipment; durable containers; equipment and instruments used

Table 5.1 (continued)

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by professional men; and equipment, furnishings and furniture for use by hotels, boarding houses, restaurants, hospitals, research institutions, schools and other services. Items of small value, such as hand tools, office desk equipment and furnishings, may be excluded on practical grounds if the customary accounting procedure is to treat them as current expense.

10.2.7. Breeding stock, draught animals, dairy cattle and the like

Breeding stock, draught animals, dairy cattle, sheep, llamas etc. raised for wool clipping.

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## Classification of tangible non-reproducible assets

5.9. For a number of uses of balance-sheet and reconciliation accounts, it is necessary to have a detailed classification of the tangible non-reproducible assets which are covered under "land" in the transaction accounts of SNA. Examples of these uses are: delineating the structure of national and sectoral wealth, measuring and assessing the availability and use of natural resources, dealing with related environmental problems and applying different modes of valuing these balance-sheet items. The proposed classification is given in table 5.2.

### Separation of land and buildings

5.10. In a number of instances it may be difficult, if not impracticable, to separate the value of land from that of the buildings erected on it, particularly in the case of the individual owners. This difficulty has been recognized in the SNA manual, where it is noted that it is sometimes necessary to include sales of land with sales of fixed assets (SNA, para. 6.128). There are two reasons for this. First, in the market for real estate and in the accounting records of transactors, distinctions are often not made between the buildings and the land on which they stand. Secondly, real estate may frequently be owned by a number of transactors and it is impossible to separate out the share of each in the site and in the structure.

5.11. The statistical problems of valuing land and buildings separately are discussed below in paragraphs 6.23 and 6.28. It is usually much easier to make a division between land and buildings for the nation as a whole than for individual institutional sectors or subsectors. Fortunately, it is much more important to have separate national data than separate sectoral figures. Separate figures are needed for studies of national wealth and environmental problems while combined figures are suitable for purposes of analysing the behaviour of the institutions of a given sector.

### Historical monuments

5.12. Historical monuments, that is, buildings and other structures listed by the relevant authorities as being of archaeological or historical interest, public statues and the like may be regarded as part of a nation's wealth. These non-reproducible tangible assets are often a source of income, involve upkeep expenditures and are occasionally sold. However, as it is extremely difficult, if not impossible, to value them realistically unless they happen to have been sold (purchased), it is proposed that they should be included in balance-sheet accounts only if this is the case. Following this procedure also facilitates reconciliation between balance-sheets and capital finance accounts; the sale and purchase of historical monuments should be recorded in the latter accounts. 1/

### Non-financial intangible assets

5.13. Transactions in non-financial intangible assets in the capital finance account of the SNA report cover purchases and sales of (a) leases of land and

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1/ It should be noted that although antiques and old art objects are, in general, non-reproducible, they are to be treated as fixed assets when held by enterprises, government or private non-profit organizations and as durable consumer goods when held by households.

Table 5.2. Classification of non-reproducible tangible assets according to type

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11. Non-reproducible tangible assets

11.1. Land

11.1.1. Land underlying buildings and works

Land on which are erected buildings and works included under items 10.2.1 through 10.2.3 in table 5.1 above. Included are access roads to farms, yards of farm residential structures and the like. In the case of residential buildings it is necessary to impose a limit to the size of private gardens surrounding dwellings; if no limit is prescribed for local taxation purposes, any excess of land over 0.5 hectares should be included under item 11.1.3 below.

11.1.2. Cultivated land

Land on which agricultural or horticultural activity is carried on for commercial or subsistence purposes, including all plantations, orchards and vineyards. Land forming a part of a farming enterprise, but not access roads, farmyards etc., which should be classified to item 11.1.1. Private gardens and plots not cultivated for subsistence or on a commercial basis should go under item 11.1.3, except that a limited area surrounding dwellings should be classified to item 11.1.1.

11.1.3. Other

Privately owned amenity land, parklands and pleasure grounds; private gardens and plots not cultivated for subsistence or commercial purposes, and the excess area above a certain limit of private gardens surrounding residential buildings.

11.2. Timber tracts and forests

All timber having a commercial value in forests, timber tracts, woodlands and copses and the underlying land.

11.3. Subsoil assets and extraction sites

11.3.1. Coal, oil and natural gas reserves and sites

Anthracite, bituminous and brown coal deposits and shafts and open-cast mines; petroleum and natural gas reserves, wells and fields.

Table 5.2 (continued)

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11.3.2. Metallic mineral reserves, mines and sites

Ferrous, non-ferrous and precious metal ore deposits, mines and other extraction sites.

11.3.3. Other non-metallic mineral reserves, mines and sites

Stone quarries and clay and sand pits; chemical and fertilizer mineral deposits, mines and other extraction sites; salt deposits, mines and extraction sites; deposits, mines and other extraction sites of quartz, gypsum, natural gem stones, asphalt and bitumen, peat and other non-metallic minerals other than coal and petroleum.

11.4. Fisheries

Stocks of fish and the associated works in the case of fish-ponds and farms, cultivated oyster and pearl beds, and other fisheries. Only commercially run fisheries in inland waters (rivers and lakes) and inshore when separated from the open sea by a barrier should be included.

11.5. Historical monuments

Buildings, statues and other structures of historical or major cultural interest which have been the subject of a transaction in the capital finance accounts.

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buildings and other structures, concessions or exclusive rights to exploit mineral deposits and fishing grounds and (b) patents, copyrights and trade marks (see para. 7.86 of SNA). These intangible assets are created at the time of the purchase (sale), that is, when a once-and-for-all lump-sum payment in respect of the lease, concession, patent or copyright has been made. For purposes of the balance-sheet accounts, it is questionable whether leases and concessions that have been purchased (sold) should be included in holdings of non-financial intangible assets. The lump-sum payment may instead be considered to be an advance of the discounted value of the stream of expected rents or royalties over the life of the lease, concession etc. and therefore may be shown as a financial asset of the payer and a liability of the receiver which are written off year-by-year. The corollary of this would be that the year-by-year write-offs should be treated as payments of rents or royalties. Treating these purchases (sales) as acquisitions (dispositions) of non-financial intangible assets avoids the imputations of financial assets and liabilities in the form of advances and of rents and royalties. Furthermore, the purchases (sales) involve a once-and-for-all payment and are usually so recorded in business records.

5.14. Leases on the rental of machinery are excluded from non-financial intangible assets. Lessees of machinery or equipment are not generally given the right to sell their lease. Furthermore, the SNA report includes the rentals for the machinery or equipment in intermediate consumption, as payments for purchased services from the legal owners of the machinery or equipment, and not in rents as property incomes. Thus the owner is to be charged with allowances for the consumption of the machinery or equipment. If lessees are given, and exercise, the option to purchase machinery or equipment at the end of their leases at less than its market value because the total rentals they have paid exceed the market values, the value of the actual payments for the purchases should be included in their gross fixed capital formation; the market values should be added to their balance-sheets and the two sets of entries should be bridged by adjustment items in their reconciliation accounts. This reflects the situation at the time of the purchases of the machinery or equipment. The corresponding entries should of course be reflected in the lessors' (sellers') accounts.

### Leases

5.15. The treatment in SNA of leases of land and buildings and other structures that is outlined above would give rise to an anomaly in balance-sheet accounts if the rents to be paid periodically for the leased real estate were to rise in the market but remain fixed in the lease. This is because the concomitant increase in the market value of the real estate during the life of the lease accrues to the lessee, not to the owner. For example, the owner would not receive the full current market value of the property if he were to sell while the property was leased out at a rent corresponding to a lower market value. On the other hand, the lessee, if he were allowed to sublease, could assign the use of the property at a higher rent than that called for in his own lease or could sell the lease at a price that reflected the rise in the market value of the rights to use the property. In other words, the ownership and possession (use) of the property have been separated. This should be reflected in the balance-sheet accounts through assigning to the holder of a lease an interest in the property itself that reflects the rise in its market value during the life of the lease, provided that the lease has more than one year to run or cannot be terminated by the owner of the property on notice of one year or less. The owner's interest in the property would be its market value at the time the

lease was granted; his interest would become the full current market value of the property a year before the lease is to terminate.

5.16. Where a once-and-for-all lump-sum payment is made to the owner of the real estate for a lease, the valuation of the share of the lessee in the value of the property is somewhat more complicated. The lessee's original share in the value of the property should reflect the lump-sum payment, in other words, the payment viewed as a discounted stream of rentals over the life of the lease. As time passes, this aspect of the lessee's share declines along with the discounted value of the remainder of the estimated stream of rentals at the time of the lump-sum payment. On the other hand, if the rentals paid in the market rise above that estimated on the basis of the lease, the lessee's share in the value of the property should reflect a corresponding increase. As in the case of leases calling for periodic payments, this part of the share of the lessee who has made a lump-sum payment reduces to zero a year before the lease or concession expires.

#### Patents, trade marks and copyrights

5.17. There are a number of ways in which holdings of patents, copyrights or trade marks may be dealt with in the balance-sheet accounts: (a) all such holdings may be covered; (b) they may be accounted for in holdings of non-financial intangible assets only after they have been purchased (sold); (c) they may be included as advance discounted lump-sum payment (receipt) of royalties in the financial assets of the purchaser and the liabilities of the seller only after purchase (sale); or (d) such holdings may be omitted altogether.

5.18. At first sight, the first of the four alternatives above may appear to be preferable. There are, however, three counter arguments. First, patents, trade marks and copyrights reflect an element of human capital, which is not to be covered in the balance-sheet accounts. Secondly, the value of all patents, copyrights or trade marks is not usually recorded in business accounts; only those that have been actually purchased are recorded. Thus only the latter enter into business decisions and financial behaviour. Thirdly, it would be impracticable, because extremely difficult and laborious, to estimate the value of all patents, copyrights and trade marks of transactors.

5.19. The third alternative above also raised serious practical difficulties because of the need to write off the lump-sum advance year after year. Furthermore, this approach to the transaction in a patent, copyright or trade mark is somewhat artificial; the purchaser and seller do, in fact, consider and record it as a purchase and sale, respectively. This is also one of the arguments against the use of the fourth approach outlined above. Both the third and fourth alternatives are of course inconsistent with the treatment of the purchase (sale) of copyrights, patents and trade marks in the transaction accounts of SNA.

5.20. The inclusion of patents, copyrights and trade marks in holdings of non-financial intangible assets only after they have been purchased (sold) - the second alternative listed above - is the most practical way of treating these assets. It is also the desirable approach as it is consistent with the point of view and accounts of enterprises and with the transaction accounts of SNA.

## Classification of financial assets and liabilities

### The classification

5.21. The classification of financial claims given in table 7.2 of the SNA report is, on the whole, suitable for purposes of balance-sheet accounts. The classification, modified in a few respects in the light of developments since it was adopted, is set out in table 5.3.

### Character and use of the classification

5.22. The first level of the classification in table 5.3 is designed to classify financial assets and liabilities according to their type of instrument, the circumstances in which the transactions took place in the first instance, their method of valuation and their degree of liquidity. A second more detailed level of classification is recommended for a number of the categories of financial claims in order to indicate the institutional sectors of the debtors in the case of financial assets and the institutional sectors of creditors in the case of a few liabilities. These subclassifications are limited to categories of financial assets and liabilities for which information about the class of debtor or creditor is of particular importance analytically and is feasible to gather. For example, in view of the concern about liabilities to, and claims on, non-residents in formulating monetary, balance-of-payments and foreign investment policies and in planning and financing economic development, distinctions between foreign and national claims are recommended for a number of the categories of liabilities and financial assets. The two levels of classification of financial claims, in combination, should be of value for compiling data on such questions as the external sinks of investment and sources of finance of the various kinds of institutional units and their degree of liquidity and solvency. For purposes of assessing their degree of liquidity and solvency it would be desirable to classify long-term bonds and loans according to their remaining period of maturity. The scheme of classification should also be of value in portraying the markets for the various types of financial claims and in distinguishing the various ways of valuing them.

5.23. The detail in which it is desirable and practicable to employ the classification of financial assets and liabilities will vary from one institutional sector and subsector to another, as well as from one country to another. It depends on such factors as the institutional arrangements of a country and the economic role and practices of the institutions, as well as on the analytical purposes the compilation is to serve. In general, the detail of classification of financial assets and liabilities that is required or that is feasible in balance-sheet accounts and tables is least for households, moderate for incorporated non-financial enterprises and general government and greatest for financial institutions. In addition, it may be desirable and practicable to use more detailed classifications of the financial assets and liabilities of financial institutions and central government than is recommended in table 5.3. In short, it is necessary to adapt the recommended classification of financial assets and liabilities to the circumstances in which and the purposes for which it is used.

5.24. It is useful to discuss below the definitions of certain categories of financial claims, in particular, the suggested modifications and amplifications in the recommendations of the SNA report.

Table 5.3. Classification of financial assets and liabilities

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Classification

(Definitions of general terms, such as bills, bonds or loans,  
are given at the end of the table)

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The number 8 in the first portion of the code identifies a financial asset; the number 9 in the first portion of the code identifies a liability.

8.1. Gold and IMF special drawing rights

All holdings of gold except for industrial uses and purposes and IMF special drawing rights.

8.2 or 9.2. Currency and transferable deposits

Notes and coins in circulation; and deposits which are exchangeable on demand at par, without penalty or restrictions, and which are transferable by cheque, or are otherwise commonly used to make payments. These categories should be cross-classified according to currency and transferable deposits (a) which are held in the national currency of a country and in foreign currencies and (b) which are the liabilities and assets of resident bodies (monetary institutions and central government) and the liabilities and assets of the rest of the world (e.g., foreign banks and Governments).

8.3 or 9.3. Other deposits

All claims, other than currency and transferable deposits, on monetary institutions, other financial institutions and government organs that are represented by evidence of deposit. In the case of most countries, deposits with savings banks would be included. Also to be included are shares in small denominations, or similar evidences of deposit, issued by savings and loan associations, building societies, credit unions and the like which are legally, or in practice, redeemable on demand or relatively short notice. These categories are to be cross-classified into deposits (a) which are held in the national currency of a country and in foreign currencies and (b) which are the liabilities and assets of resident and non-resident institutions.

8.4 or 9.4. Bills and bonds, short-term

Bills and bonds the original maturity of which is less than one year. Claims with optional maturity dates, the latest of which is one year or more away, should be considered to be long-term. The category should be subdivided according to debtor, as follows: (a) resident corporations, (b) central government, (c) state and local government and (d) the rest of the world.

## 8.5 or 9.5. Bonds, long-term

Bonds, debentures etc. the original maturity of which is one year or more. Included in the case of corporate issues are preferred shares of stocks, excepting participating preferred securities. The category should be subdivided in the same fashion as category 8.4. In addition, subdivision of the bonds and debentures according to (a) quoted on the stock exchange and (b) not quoted on the stock exchange and according to remaining period to maturity, of (a) less than one year and (b) one year or more, will be of value.

## 8.6 or 9.6. Corporate equities, including capital participations

Instruments and records acknowledging claims to the residual value, and residual income, of incorporated enterprises, after the claims of all creditors have been met. Equity securities do not provide the right to a pre-determined income, or to a fixed sum on dissolution of the incorporated enterprise. Ownership of equity is usually evidenced by shares, stocks, participations or similar documents. Preferred stocks or shares which also provide for participation in the distribution of the residual earnings, or value on dissolution, of an incorporated enterprise are included. The categories are to be subdivided into the securities of (a) resident corporations and (b) the rest of the world, i.e., non-resident corporations; and in each case securities quoted on the stock exchange are to be distinguished from other securities.

## 8.7 or 9.7. Short-term loans, n.e.c.

All loans not classified elsewhere, the original maturity of which is less than one year. All loans repayable on demand should be classified as short-term even though these loans are expected to be outstanding for more than one year. Covered are loans extended to business, government, households etc. by banks, finance companies and others, including instalment loans, hire-purchase credit and loans to finance trade credit. It will be of value to subdivide these categories according to the resident sector and the rest of the world in the case of debtors and creditors, respectively, when compiling detailed data on claims.

## 8.8 or 9.8. Long-term loans, n.e.c.

All loans not classified elsewhere, the original maturity of which is one year or more. It will be of value to subdivide these categories according to the resident sector and the rest of the world in the case of debtors and creditors respectively, when compiling detailed data on claims. It may also be useful to distinguish loans secured by mortgages from other loans and loans, the remaining period to maturity of which is less than one year, from other long-term loans.

Table 5.3 (continued)

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8.9 or 9.9. Net equity of households on life insurance reserves and on pension funds

The reserves held against life insurance and annuity policies by insurance companies, whether mutual or incorporated, and by employees' pension funds, friendly societies and similar bodies, in order to cover the risks of insuring during a period of account, pre-payments of premiums in respect of future risks, and other elements of saving involved in the policies.

8.10 or 9.10. Proprietors' net equity in enterprises

The difference between the sum of the value of the assets of the quasi-corporate enterprises and the sum of the value of the liabilities of the enterprises to third parties. These categories should be subdivided into resident and non-resident quasi-corporate enterprises and resident and non-resident owners, respectively, in the case of detailed analysis of claims.

8.11 or 9.11. Trade credit and advances

Trade credit extended to enterprises, government and households; and advances for work which is in progress or is to be undertaken. In the detailed tabulations of claims, these are to be subdivided according to resident sectors and the rest of the world in the case of debtors and creditors, respectively. It will also be of value to separate short-term trade credits and advances from long-term trade credits and advances. The dividing line between the two types of credit is one year, as in the case of the other distinctions between short-term and long-term claims.

8.12 or 9.12. Other accounts receivable and payable

Accounts receivable and payable which are not included above, for example, in respect of taxes, interest, dividends, rent, wages and salaries and insurance claims which are due to be received or paid. It will be useful to classify these categories according to the resident sector and the rest of the world in the case of the debtor and creditor, respectively.

8.13 or 9.13. Other

Differences in time of recording between payments and receipts in respect of financial claims, and statistical discrepancies in the figures between a category of financial assets and the corresponding liabilities which it is not feasible to adjust in the data for the categories listed above. It will be valuable, if feasible, to indicate the extent to which differences in time of recording and statistical discrepancies account for the data entered here, and the broad categories of claims to which these differences and discrepancies relate.

Table 5.3 (continued)

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Definitions of general terms

- Bill:** A security which gives the holder the unconditional right to receive a stated fixed sum on a specified date and which is issued and traded in organized markets at a discount, depending on the rate of interest and the time of maturity.
- Bond:** A security which gives the holder the unconditional right to a fixed money income, that is, payment of interest is not dependent on the earnings of the debtor, and which is usually issued and traded in organized markets. With the exception of perpetual bonds, a bond also gives the holder the unconditional right to a stated fixed sum on a specified date or dates. Mortgages are not classified here; they are included under loans.
- Loan:** A direct transaction between borrower and lender, where the lender receives no security evidencing the transaction or a non-negotiable document. Included are transactions which are essentially loans, though the debtors may issue a security, for example, bonds specifically issued by the government to the central bank as security for a note, liens and mortgages created as a security for a loan.
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## Selected categories of the classification

### Gold and IMF special drawing rights

5.25. As the SNA report was published before the issue of special drawing rights by the International Monetary Fund, SNA's classification of financial assets does not furnish a category for these assets. Special drawing rights are acceptable international assets for balance-of-payments settlements and are treated as part of a country's official international reserves by IMF. As, in these respects, they are similar in character to gold, special drawing rights have been added to the category for gold in the SNA classification of financial claims. Like gold, they are also not considered by IMF to be a liability of anybody; the issue or withdrawal of special drawing rights by IMF are therefore to be accounted for in the reconciliation accounts of the system.

### Currency and transferable deposits

5.26. The subdivisions of this category that are suggested in table 5.3 are useful for analytical purposes. The distinction between currency and transferable deposits is valuable for monetary and liquidity analysis. This is also true for the classification, in turn, of these claims according to the kind of debtor or creditor resident and non-resident institutions.

### Other deposits

5.27. It may also be advantageous and practicable to classify other deposits according to kind of debtor or creditor institutions in countries with well-developed financial institutions. Non-negotiable time certificates of deposit should be included in this category; negotiable time certificates of deposits should be classified to "short-term bills and bonds".

### Short-term bills and bonds

5.28. It is sometimes difficult to decide whether a holder of a short-term bill has a claim on the transactor on whom the bill was originally drawn or on the immediately previous holder. Where the bills are normally marketable, it is best to classify them according to the transactors on whom they were first drawn; otherwise, the bill should be treated as a claim on the immediately previous holder. Each endorsement (purchase-sale) then creates a new financial asset and liability.

### Long-term bonds

5.29. Long-term bonds are to include all bonds the original maturity of which is one year or more. Since long-term bonds which mature in less than a year are very liquid assets - they are certain to be redeemed at par within a short period - it is desirable to classify long-term bonds in addition according to remaining period to maturity of less than one year and of one year or more. Bonds that are convertible into stock are becoming important in some countries. It will be useful to distinguish these bonds from other bonds for purposes of both valuation and analysis. For the same purposes, long-term bonds should be classified into those quoted and those not quoted on exchanges.

## Corporate equities

5.30. This category includes ordinary, common or redeemable shares, participating preference shares, shares in mutual funds or unit trust units, in co-operatives or in limited liability partnerships. These shares can usually be sold without the enterprise being dissolved.

## Net equity of households on life insurance reserves and on pension funds

5.31. General principles that have been adopted for balance-sheets are that only that element of an institution's wealth which can be appropriated by another transactor should be counted as his asset and that only liabilities which are certain (not contingent), and the value of which can be determined, should be recorded. In the case of the reserves held against life insurance policies and pension arrangements, the covered individuals have claims to the future payment of a capital sum or income on the occurrence of death, on the attainment of a specified age and/or period of coverage. As one or the other of these events is bound to occur and it is possible to ascertain the present value of the individual's claim to the payment of capital or income, the reserves held against life insurance and pension arrangements should be considered to be assets of the covered individuals and not part of the independent net worth of the insurance companies or pension funds. This is also the case for pre-payments of premiums and other elements of saving by the individual which may be involved in the policies or pension arrangements.

5.32. The reserves which are earmarked by life insurance companies for policy holders, including pre-payments of premiums and actuarial and contingency reserves, do not represent the whole of the net worth of the companies. In most instances there are shareholders; even when this is not the case, a clear distinction is drawn between the reserves held against life policies and other reserves. The usual accounting practice of mutual insurance companies, that is, where the policy holders are the owners, is to transfer realized and perhaps unrealized capital gains to policy holders' reserves when they become large and are considered to be permanent.

5.33. The treatment of life insurance reserves that is set out above was adopted in the transaction accounts of SNA. However, SNA does not allow pension funds to have an independent net worth; table 7.2 and paragraph 7.98 of the SNA report call for the automatic transfer of any realized and unrealized capital gains in the funds' assets to the net equity of households. It is doubtful whether there is any difference in the situation and practices of life insurance and pension funds which justifies a difference in treatment. Most pension funds show a separate figure on the liability side of their balance-sheets for the "fund", which does not differ in concept from that shown for policy holders' reserves in the balance-sheets of life insurance companies. Any excess of the total value of assets over the value of liabilities to third parties and the "fund" is shown in the balance-sheet as separate reserves. An additional reason for treating pension funds in the same way as life insurance companies is that when pension schemes are operated by mutual insurance companies, allocation of increases in the value of assets to households is not recommended in SNA. The definition of the net equity of households on pension funds in table 7.2 of the SNA report has therefore been modified in table 5.3 above.

5.34. The definition of the net equity of households on life insurance reserves and on pension funds is limited to claims on fully funded schemes; unfunded and social security schemes are excluded. Thus the saving of households recorded in the transaction accounts of SNA does not take into account the excess of imputed contributions over pensions paid or of social security contributions over benefits. It may be argued that the behaviour of households will be affected by the benefits they expect from unfunded pension schemes or social security. However, in the case of unfunded pension and social security schemes there is no clear equity in a fund and it would be very difficult to value such equity, however defined.

5.35. There is a further minor point that should be discussed in the case of life insurance. In some countries insurance companies issue capital redemption or sinking fund policies for the amortization of leases and loans; the policy holder makes a periodic payment to an insurance company instead of setting up his own sinking fund. Since the payments do not depend in any way on the probability of mortality, these policies are not strictly a form of life insurance. Nor are they a form of casualty insurance since the contracts are long-term and the payments are fixed and certain, not contingent on the occurrence of a stochastic event. The policies have a surrender value. This type of insurance is very small in volume and is to be included with life insurance.

#### Other accounts receivable and payable

5.36. Other accounts receivable and payable, which exclude trade credit and advances, cover a range of items, such as taxes, interest, dividends, rent, wages and salaries and insurance claims due to be received or paid. It will usually be necessary to derive these balance-sheet figures from the business accounts of transactors. If in the business accounts the practice is to enter these items on an accrual basis rather than on a due-to-be-paid basis, it will not be practical to adjust the figures to the latter basis for items such as taxes, interest or insurance premiums even though SNA calls for it.

#### Classification of consumer durables

5.37. Though consumer durables are to be omitted from the balance-sheet accounts, it has been suggested in paragraph 3.5 above that a supplementary table should be compiled which refers to major consumer durables. The classification of consumer durables that may be used for this purpose is given in table 5.4; it has been derived from table 6.1 of the SNA report, where the various categories are also defined.

Table 5.4. Classification of major consumer durables

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4.1.1. Furniture, fixtures, carpets and other floor coverings

Beds, chairs, tables, sofas, storage units and tallboys; carpets, large mats and linoleum; cribs, high-chairs, playpens; door and dividing screens; sculptures, carvings, figurines, paintings, drawings, engravings and other art objects; venetian blinds; fire-place equipment; other furniture and fixtures.

4.3.1. Heating and cooking appliances, refrigerators, washing machines and similar major household appliances, including fittings

Covers major equipment like clothes-washing and -drying, dish-washing, ironing, sewing or knitting machines; electric floor-scrubbing, waxing and polishing machines; vacuum cleaners; water-softening machines; refrigerators, food freezers and iceboxes; room air-conditioning units; cooking appliances other than spirit stoves and plate-warmers; reflector ovens; camping stoves and similar appliances; toasters; electric fans; electric coffee-makers and heating appliances; lawn-mowers; non-portable safes; water-pumps.

6.1. Personal transport equipment

Motor-cars; trailers and caravans; motor cycles and bicycles.

7.1.1. Wireless and television sets and gramophones

Wireless and television sets; gramophones, record players and tape recorders; radio transmitting and receiving sets for amateur radio stations; clock-radios.

7.1.2. Photographic equipment, musical instruments, boats and other major recreational durables

Aeroplanes; boats and outboard motors; cameras, projection equipment and other photographic equipment; binoculars; microscopes and telescopes; pianos, organs, violins, cornets and other major musical instruments; typewriters; power-driven equipment for wood-working, metal-working, etc.; horses; swimming pools which are not permanent fixtures.

8.2.1. Jewellery, watches, rings, precious stones, antiques and art objects.

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## Chapter VI

### VALUATION

#### General considerations

6.1. There are a number of factors which must be considered in deciding on the most appropriate mode of valuing the items of national and sectoral balance-sheet accounts. First, and of major importance, the mode of valuation should result in the most useful data for purposes of studying resources and wealth and economic and financial behaviour. Secondly, the mode of valuation should be practicable to use; the values chosen must be measurable and collectible. Thirdly, as is noted in the SNA report, the use of the same mode of valuation for all kinds of assets and liabilities would contribute to the comprehensiveness and simplicity of the relationships between these items in the balance-sheet accounts. While this last consideration cannot be decisive, it is important in facilitating the compilation and analysis of balance-sheet data. The use of the same mode of valuation would, for example, permit the cross-checking of assets against liabilities for each kind of claim or the estimating of a sector's holding of a given asset as the difference between the sum of the corresponding outstanding liabilities and the sum of the holdings of the asset by the other sectors.

6.2. National accounting is concerned with combining and comparing the accounts - in this case the balance-sheets - of all transactors in the economy; it is therefore axiomatic that entries must be valued identically for all transactors. Assets must be valued on the same basis and in terms of prices on the same date, no matter who owns them; liabilities must also be treated uniformly as to mode of valuation and date of prices, no matter who owns them. While it is not essential that financial claims should be valued identically when they are owned as assets and when they are owned as liabilities, adjustment entries would be necessary if the liabilities were to be valued on a different basis than were the financial assets. The situation is not the same in private accounting. There the accountant is concerned with only one transactor at a time; and the accounts serve to record the stewardship of the managers of an enterprise over sums of money entrusted to them at different times in the past. Thus in private accounting the cost of acquisition is the natural mode of valuation for assets; the fact that the costs are an amalgam of figures expressed in different price levels may be ignored. Liabilities are naturally expressed in terms of their nominal or face value. Even private accounting, however, cannot completely ignore the comparability of one set of accounts with another, particularly when the accounts are the main guide to investors on the stock exchange. Assets are sometimes revalued in terms of more recent price levels; accountants are continually discussing how best to portray the effects of inflation in business accounts.

6.3. A principle that is applicable for both business and national accounting is that each asset and liability should be valued separately. An enterprise should not be valued, as a whole, on the basis of either the stock-exchange value of the shareholders' equity or the payment made in a takeover. The difference between the sum of the values of the assets and the sum of the values of the liabilities

and of share capital, each asset and liability valued separately, is the net worth of the enterprise. Net worth is not valued separately and may change because of changes in the value of individual assets or liabilities.

### General aspects of valuing assets

#### Market values

6.4. There is little, if any, doubt that the current market values, or the equivalent, recommended in paragraph 2.87 of the SNA report are the most appropriate mode of valuation for assets. Investors in financial assets such as securities and tangible assets such as land make decisions in respect of these assets in the light of their sales value in the market. This is also so for producers of commodities. Users of fixed assets or raw materials in production are concerned with the current costs in the market of replacing these items. Acquisition costs are ruled out because many different price levels are involved. However, for the purposes of estimating productive capacity, capital inputs and capital output ratios, a valuation of fixed assets gross of the consumption of fixed capital is also needed. In order to provide data at gross value which tie in with the statistics of tangible assets, it is therefore recommended that fixed assets should be estimated both gross and net of the consumption of fixed assets in balance-sheet statistics.

6.5. The common definition of a market value is the value arrived at in a transaction between a willing buyer and a willing seller or, alternatively, the value reached in an arm's-length transaction into which only commercial considerations enter. The difficulty is that the markets on which transactions meeting these conditions occur are of several different types.

6.6. There is a feature of balance-sheets in national accounting which acts as a guide in determining whether or not a given market is a suitable source of the data on market values for use in balance-sheets. It arises from the fact that the balance-sheets of transactors which are combined into sectoral balance-sheets are, notionally at least, all drawn up at a single moment of time. Given this simultaneity of valuation, the only possible assumption that can be made is that the transactor is continuing in his present business and on the present basis. A valuation is needed that is appropriate to the business as a going concern. This means that prices from markets that impose a penalty on liquidation cannot be used. The distinction is between markets for assets that are traded in the normal course of events and markets for assets that are traded rarely and then generally in the exceptional circumstances of the financial distress or liquidation of businesses. Examples of markets that do not impose a penalty on liquidation are the stock exchange, the market for real estate and the market for second-hand motor-cars. Examples of markets in which only obsolescent assets are traded or which are used only when the owners of assets are in financial difficulties are those for second-hand industrial plant and equipment and for second-hand furniture. Even if for financial claims there are markets in some countries where existing assets are normally traded only in conditions of distress; the market for house mortgages in the United Kingdom furnishes an example. None of the markets in which assets are not traded in the normal course of events is suitable for purposes of determining market values for use in balance-sheets.

## Variants of market value

6.7. The ideal market for the purpose of the valuation of items of balance-sheets is the stock exchange. Not only is each asset that is traded completely homogeneous but its appropriate price is listed at regular intervals. For securities quoted on a stock exchange it is therefore feasible to gather the market prices of individual assets and of broad classes of assets and, in addition, to determine the global valuation of all the existing assets of a given type. The information from the stock exchange may be used to price unquoted securities by analogy. For this purpose it is legitimate to make an allowance for the inferior marketability of the unquoted securities since prices on the stock exchange take account of the degrees of marketability of the range of quoted securities.

6.8. Unfortunately, the stock exchange is virtually unique in most countries. While there are a number of other markets from which price quotations would be acceptable, they are usually deficient in some respect. None of them will make possible a global valuation of all existing assets of a particular class; most of them are concerned with assets which are far from homogeneous. However, even the most dispersed trading in a market in the most heterogeneous assets may be made to yield useful data on prices, given the availability of a reliable reporting agency and the possibility of classifying transactions into relatively homogeneous, meaningful categories of assets. Undoubtedly in many countries statistical authorities will find it necessary to extend market information into new fields by themselves initiating the reporting and classification of prices.

6.9. The types of market considered thus far all yield data on prices that can be multiplied by indicators of quantity in order to compute the total market value of different classes of assets held by sectors and of different classes of their liabilities. Between them they cover nearly all financial claims, real estate and livestock. Not all data on prices may be applied in this direct way, however; when information on prices is used indirectly, the resulting valuation may be considered to be a variant of market value though it is conceptually similar.

6.10. The most important variant is the use of written-down replacement cost for most tangible reproducible fixed assets. The common method of making these estimates is the perpetual inventory method, which is illustrated in table 9.2. When the perpetual inventory method is the only approach used, figures of the written-down replacement value of the stock of fixed assets on a given date, say the beginning of a year, are based first of all on figures of gross fixed capital formation, classified as much as possible according to type of fixed asset and year of acquisition, accumulated over a long enough period to cover the acquisition of all fixed assets in the stock in question. The period should be long enough so that fixed assets acquired before the years when the figures of gross fixed capital formation began will have been retired, that is, their average useful life will have run out. Conceptually, the cost of acquisition of each class (same type and same year of acquisition) of fixed assets is adjusted to current gross replacement cost by an index of the average change in prices from the year of acquisition to the date in question; an allowance, valued at current replacement cost, for accumulated depreciation between the two dates is deducted in order to arrive at its written-down current replacement cost. In practice, the perpetual inventory may be built year-by-year in the constant prices of a given year, as is illustrated in table 9.2. Net capital formation (gross capital formation less the allowance for depreciation) during a year, adjusted to constant prices, for a class of fixed assets is added to

the written-down value, in constant prices, of its accumulated net capital formation as of the beginning of the given year; and the resulting constant-price value of the net capital stock as of the beginning of the next year is converted to current replacement cost as of the latter date. The straight-line method of estimating the consumption of fixed capital is the best method when financial behaviour is being studied, since it corresponds to common business practice. Once the perpetual inventory is built, it is maintained year-by-year by the same means as are outlined above. Alternatively, the perpetual inventory method may be used in year-by-year extension of data gathered in national censuses or from fire insurance records on the written-down value of the stock of fixed assets as of a given date, classified as much as possible according to type and age. The perpetual inventory method can, of course, also be used to estimate the gross replacement value of fixed assets. Accumulated depreciation then is not deducted in arriving at the initial estimate of the gross replacement cost of the capital stock, and the value of constant prices of gross rather than net fixed capital formation is added year by year.

6.11. The gathering and compilation of appropriate price index numbers on capital goods for purposes of the perpetual inventory method raises difficult conceptual and practical problems. Since each construction project and each piece of highly fabricated heavy machinery and equipment is produced on contract and usually consists of unique features, the compilation of comparable series of price indexes must be based on pricing representative models or proxies. Price series on the models may be based on direct estimates of producers, on the combination of comparable prices of components or on regressions of the transaction values (costs) of completed projects on their strategic characteristics. Even in the pricing of less complex capital goods, as proxies or in their own right, serious problems of and inadequacies in accounting for quality changes are encountered. The replacement costs arrived at from these price series can be taken as only approximations to market values. In addition to the complications and deficiencies mentioned above, many of the price series gathered on capital goods give too little attention to the valuations of purchasers and therefore do not reflect the forces of demand which, together with those of supply, determine market prices.

6.12. The other two variants of market value both suffer from the imprecision of data on the market prices which have to be used, even though the values arrived at are not conceptually different from the values on the stock exchange. The first variant of market value consists in the valuing of assets the returns from which are either delayed (as with timber) or spread over a lengthy period (as with subsoil assets). While normal market prices are used to value the ultimate output, a rate of discount must, in addition, be used to compute the present value of the future returns. The converse of this variant of market value consists in the computing of the total value of an asset by capitalizing income; it is then necessary to derive a capitalization factor from information about the market. The rate of discount and the capitalization factors should undoubtedly be derived from information based on transactions in the particular type of assets under consideration - forest lands, mines and quarries, ground rents and leases. This information, however, is nearly always vague; the statistician often has to be content with such declarations as "well-secured ground rents are changing hands at 15 years' purchase" or "the general run of investors in mining enterprises expect a return of not less than 10 per cent". Even such vague information about the state of the actual market concerned is to be preferred to the use of a general rate of interest derived from the yield on long-term government bonds.

## Assets in foreign currencies

6.13. Among financial assets there will be some that are basically fixed in terms of foreign currencies, for example, bank deposits and securities that are the liabilities of non-residents. The value of these assets will change when there are changes in official parities or when currencies are "floating". The stock-exchange prices of marketable securities already allow for fluctuations in exchange rates and no conversion is necessary. The foreign exchange market is well documented and will provide suitable conversion rates for other claims. The conversion rates used should be the average daily transaction rates during the course of the balance-sheet date; the balance-sheet assets and liabilities are being valued as of that date.

6.14. A special case arises when part of the foreign exchange market is segregated; funds for purchases of foreign securities or capital participations may not be obtained except through a pool of foreign currency fed by prior sales of equivalent national assets owned by non-residents. The foreign currency then acquires a premium value. The private accounting treatment of the premium (or occasionally discount) on the currency varies; the basis of conversion for items expressed in foreign currencies is not always explicitly stated in published accounting documents. For purposes of the balance-sheet accounts, the value in national currency of the foreign assets should reflect the appropriate investment premium.

## Valuation of specific assets and liabilities

### Reproducible fixed assets

6.15. For most reproducible fixed assets valuation at gross and written-down replacement cost is appropriate. It may, in addition, be necessary to make adjustments for the value of written-off fixed assets which have not yet been retired. The sources of data and methods of estimating the gross and written-down replacement cost are outlined in paragraphs 6.10 and 6.11 above. The perpetual inventory method is most commonly used. As the steps of the perpetual inventory method exactly mirror the sequence of the accounts - opening balance-sheets, capital finance accounts, reconciliation accounts and closing balance-sheet - the required entries for each of these accounts are automatically provided. A similar method of arriving at an approximation to market value will also be necessary for roads, dams, dikes, breakwaters and similar fixed assets. No allowance for consumption of these fixed assets is called for in the SNA report because of the long and indefinite duration of their useful life if they are properly repaired and maintained. It seems appropriate to follow the same practice in the balance-sheet accounts.

6.16. Paragraph 7.21 of the SNA report recommends that during each year of their expected useful life, fixed assets should be written down (depreciated) on a straight-line basis. If, for example, the expected useful life of a machine is 10 years, the consumption of fixed capital during a given year is one tenth of its current gross replacement cost during the year in question. In the transaction accounts of SNA the allowances for depreciation of a fixed asset during preceding years are not adjusted for the change in gross replacement cost of the asset from these years to the current year. For the purposes of the balance-sheet accounts, however, the accumulated allowances for consumption of fixed capital made in past periods should be adjusted to the gross replacement cost of a fixed asset as of the balance-sheet date.

6.17. There are a number of approaches to writing off the value of fixed assets besides straight-line depreciation, such as, for example, declining balance and declining rate depreciation. The straight-line method is recommended because it is the approach most commonly used in business accounting. This method best reflects the financial behaviour of enterprises in accumulating reserves for replacement of capital goods, in reflecting depreciation charges in prices and so on. In practice, the straight-line method is often applied to the average expected useful life of a given type of fixed asset; it may be improved by using a frequency distribution of expected useful lives of the fixed assets.

6.18. There are exceptions to the use of valuation at written-down replacement cost for certain reproducible fixed assets. These are discussed in the succeeding paragraphs; the general question of the valuation of land and buildings is dealt with in paragraphs 6.23 through 6.30.

6.19. The first exception to the use of valuation at written-down replacement cost is the case of breeding stock, dairy cattle and other livestock; these animals are classed as fixed assets. The SNA does not call for allowances for depreciation in these animals in view of the impracticability of making the estimates; their natural growth should however be taken into account in balance-sheet data. Furthermore, the market prices for the livestock fluctuate substantially. Auction prices for livestock are usually available; these can be applied to figures for the number of heads of livestock to determine their market values. It will be necessary to have figures for both the number of heads and for auction prices in terms of age groups of the different types of livestock so that, in the reconciliation account, the element of natural growth may be separated from revaluations due to price changes.

6.20. Written-down replacement cost is of course not applicable to art objects and antiques; neither are they replaceable nor do they have a limited useful life. While auction and other transaction values may be available for certain antiques and art objects from time to time, the values are usually not available on a regular basis and cannot be used to value all antiques and art objects. Furthermore, data on holdings of these items may not be available. Probably the most useful and practical approach to valuing stocks of these items is to gather data on the values at which they are insured against fire, theft etc. to the extent information is available.

### Stocks

6.21. In the transaction accounts, additions to and withdrawals from stocks are, in principle, to be valued at purchasers' values when they are acquired from outside the establishment or at producers' values when they are processed internally. In practice, it may be necessary to value additions to and withdrawals from stocks of partially completed goods (work-in-process) at direct cost, perhaps with the addition of margins for indirect costs and normal profits. The purchasers' and producers' values to be used are those current at the time the goods are added to or withdrawn from stocks. The physical change in stocks valued at average prices during the period, say a year, is to be shown in the capital finance accounts, leaving the remainder of the difference in value between opening and closing balance-sheets to be attributed to stock appreciation, which is an entry for the reconciliation account. This valuation of the physical increase in stocks is consistent with carrying them at current market values in balance-sheets when the

valuation at average prices during the period in question is adjusted in the reconciliation account to valuation at prices as of the closing balance-sheet date. The reconciliation account then shows the change in the value of stocks due to the change in prices between the opening and closing balance-sheets.

6.22. The balance-sheet figures for stocks frequently have to be estimated by adjusting figures of book values of stocks in business accounts. In general, it is necessary to adjust the book values to current market values by taking into account the price changes during the average period elapsed between the time of addition of the goods which are still in stock and the balance-sheet date. Stocks in business accounts may be valued on the principle of first in, first out or on that of last in, first out or on the average over the period. Recording on the basis of last in, first out gives a good approximation to valuation at market prices, especially if additions to and withdrawals from stocks are not too infrequent. The book values may then be accepted for purposes of the balance-sheet accounts. Recording in terms of first in, first out gives the poorest approximation to market values for purposes of balance-sheet accounts. However if, for example, stocks in hand have been built up over the preceding three months and if prices of the goods in stock rise by an average of 4 per cent per year, the excess of current market values over book values will be only one half of a per cent. In these circumstances, it will probably not be worth while to adjust the book values for purposes of the balance-sheet accounts even where the first in, first out method of stock valuation is used.

#### Non-reproducible tangible assets

##### Land

6.23. However simple the system of land tenure in a country may be, there are considerable difficulties in valuing the ownership of land and buildings by the institutional sectors and in separating the value of land from that of the buildings erected on it. These difficulties do not apply to a global valuation of land any more than they apply to a global valuation of buildings and works at replacement cost by the perpetual inventory method.

6.24. In the case of the global valuation of land, the calculation may be performed in two parts. The first part relates to the valuation of land which is separate from buildings - cultivated land, including plantations, orchards and vineyards, and privately owned amenity land, parklands and pleasure grounds. The calculation is performed by multiplying statistics of area by indicators of market values per unit area. The statistics of both areas and market prices must be classified to some degree by quality and use of the land and by regions. A minor problem is that the market values for cultivated land often include farm buildings sold with the land. If it is not feasible to separate the two by use of the method described immediately below, the combined value of the farm buildings and land may be recorded as the value of the land. The other part of the calculation relates to land underlying buildings. For this the normal method is to gather site:structure valuation ratios from valuation appraisals and to deduce the value of land from the replacement cost of the buildings or from the value on the market of the combined land and buildings. In some instances, the market will furnish data directly on the value of the land.

6.25. The complications begin when the value of the land and buildings owned by institutional sectors is to be estimated; they arise for both land and buildings. The problems are of three kinds: (1) the divergence between the replacement cost of buildings as estimated by the perpetual inventory, using straight-line depreciation and an index of construction costs of new buildings, and the prices which existing buildings fetch on the open market; (2) the separation of the different interests of transactors in the total value of a site and the building erected on it; and (3) the separation of the value of the land from the value of the building. The problems may be illustrated by considering three very simple cases.

6.26. The simplest case of all is that of owner occupation, in which the occupier owns both the building and the site on which it is erected. There is no problem; the calculation can proceed exactly as for global valuation. Fortunately this situation often occurs in practice.

6.27. In the second case the occupier rents the building from the owner, who owns both the building and the site. Let us assume that the building has a value at current written-down replacement cost of  $V$  and the site a current market value of  $S$ . The occupier has a 99-year lease with 50 years to run and he pays a fixed rental of  $R$  throughout the entire period of the lease. Let us further assume that if the lease were being negotiated today the rental would be  $2R$ . (The period that must elapse before the owner can change the rent to  $2R$  is more important than the unexpired life of the lease; the latter assumes importance if there is a possibility of letting the property to another tenant who would be willing to pay a rental of  $2R$ .) If the owner were to sell the building and the site, he would certainly not receive  $V + S$ . The price which he could command would be the fixed rental,  $R$ , capitalized at the going market rate of return; as with the price of a dated bond, the closer the time at which the owner can negotiate a higher rent, the greater the part this reversion to a higher rent plays in the price which the owner can command. Assuming that he has freedom to do so, the lessee can assign the lease to somebody else or sublet the property to somebody else. In the latter case the lessee could secure  $2R$ ; in the former case the price fetched by the lease would be based on the ratio  $2R/R$  and the period before reversion to a higher rent. In principle,  $V + S$  equals the value of the building and site to the owner plus the value of the lease to the occupier. Effectively the part of the value of the building and site that is equivalent to the difference between their full current value (the sum of the replacement cost of the building and the market value of the land) and the capitalized value of  $R$ , should be attributed to the occupier and included in his balance-sheet. The values of the building and land allocated to the occupiers' and owners' balance-sheets of course need to be divided between their assets in the form of buildings and their assets in the form of land. This may be done on the basis of the site:structure valuation ratios from valuation appraisals.

6.28. The third case is still simple enough to be found under any conditions of land tenure. It involves three separate transactors: owner A, who owns the site; owner B, who pays ground rent to owner A for the site but who owns the building, which he has let to the occupier as in the second case. The additional point to note in this case is that the capitalization of the ground rent will not equal the value of the site if that site could command a higher ground rent today and if there is some time to run before the ground landlord can raise the ground rent. Once again the value of the site is shared among the transactors. Exactly the same reasoning applies to cultivated land, including plantations, orchards and vineyards, owned by one transactor and leased to another, and to concessions of mineral rights, fishery rights and so forth.

6.29. Because of the differences in land tenure systems and data availability in various countries only a generalized solution for estimating the ownership according to sector of land and buildings can be offered. We assume that the following estimates have been made: (a) a global replacement cost estimate of the value of buildings; (b) a global estimate of the value of land, with a separate estimate for the value of land underlying buildings; and (c) the total of rents for land paid and received (see para. 6.47 of SNA). For rents paid (but not for rents received) it is necessary to have a division between rents on short tenancies and rents on leases for a period of years. This division may usually be determined relatively easily as short tenancies generally apply only to certain classes of property let to certain kinds of occupiers. It is suggested that if it is found that the estimates of replacement costs of buildings deviate substantially from the actual value of buildings on the market as evidenced by transactions, the estimates should be revised by using indexes of the market prices of buildings in place of indexes of construction cost in using the method of perpetual inventory.

6.30. As problems are presented only where ownership and occupation are divorced, the estimates of ownership of both land and buildings by institutional sectors may start by dealing with cases of complete owner occupation. The value to the owner of tenanted land and tenanted buildings may next be estimated by capitalizing the rents received by each institutional sector for land and for buildings. When the owners' values of owner-occupied and tenanted property are added together, the result should, in principle, fall short of the global value of the land and buildings by an amount equal to the share of ownership accruing to occupiers by virtue of the leases which they hold. These estimates should be made separately for land and for buildings; the two residuals may be divided among institutional sectors in accordance with the rents which are paid by each sector, excluding those paid for short tenancies. A residual method of valuation is never very satisfactory, especially because there is a danger that the capitalization factors used on rents may be incompatible with assumptions made in the global calculations. A direct estimate of the value to lessees of their interest in the total value of property would require the following additional information: (a) estimates, sector by sector, of the extent to which rents actually paid deviate from rents in newly negotiated leases; and (b) information on the average maturity (period to next rent revision) of leases, sector by sector. In order to separate the interest of the lessees in the total value of the property into that in the buildings and in the land, estimates of the division of the rents into the two components are needed.

#### Timber tracts

6.31. The value of timber tracts should cover the value of the underlying land as well as that of the standing timber. Where the sale and purchase of timber tracts are frequent enough, the market may furnish the data required to make the estimates. These data should relate to value per unit area classified by kind of timber as well as by the situation and character of the land. Otherwise it will be necessary to value timber tracts as the sum of estimates of the values of the standing timber and of the underlying land.

6.32. In a number of countries the national forestry service already makes estimates of the value of growing timber, both state-owned and privately-owned, on generally accepted principles. Timber is a product which takes many years to come to maturity and which yields its services once and for all. The conventional way of valuing standing timber is to discount the future proceeds of selling the timber

at prices current in the present after deducting the expenses of bringing the timber to maturity, felling etc. Due allowance is to be made for the value of thinnings. The market value of the underlying land would need to be estimated from land transactions in the market.

#### Subsoil assets

6.33. The method of valuation of subsoil assets is, once again, that of discounting the estimated net proceeds of sale of the extracted minerals, using as a rate of discount the return expected by investors in mining or quarrying enterprises. Because wasting assets are involved, it is customary to provide for a sinking fund to amortize the capital invested over the expected life of the mine or quarry. Bain discusses several of the conceptual and practical problems of estimating the value of reserves of minerals and other subsoil assets. 1/ For a number of reasons this is an area in which large and sudden revaluations must be expected arising from factors other than changes in the current price of the asset, changes in the rate of discount or changes in the rate of interest assumed for the sinking fund. Among these factors are: (a) new discoveries may be very extensive, covering whole new fields of deposits; (b) changes in technology may bring extensive deposits within the range of those commercially exploitable; and (c) changes in market conditions, particularly for fuels, may entail drastic revisions of future rates of output. These changes should be reflected in the reconciliation accounts.

#### Historical monuments

6.34. Almost any valuation of a historical monument could be defended, anywhere between zero, on the grounds that it was fully depreciated, and the amount that a wealthy individual or corporation would pay to have the monument dismantled and erected elsewhere. As a compromise is necessary, the actual value of the purchases (sales) of historical monuments may be used since the monuments are to be covered in balance-sheets only when sold.

#### Non-financial intangible assets

6.35. The value of patents, trade marks and copyrights included in the balance-sheet account equals their cost of purchase (sale).

#### Financial assets

6.36. Claims held as assets should, in principle, be valued in one of two ways: either (1) at nominal (face) value if they can be realized on demand or at short notice at their full nominal value or cannot be transferred as assets from one transactor to another; or (2) at market value if they cannot be realized on demand or at short notice at their full nominal value or cannot be transferred as assets from one transactor to another, or if they cannot be realized on demand or short notice but can be transferred as assets from one transactor to another. The application of this principle, tempered by considerations of practicability, results

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1/ Foster Bain and others, "Subsoil wealth", Studies in Income and Wealth, vol. 12 (1950).

in the proposal that market values should be used to value financial assets in the form of gold, long-term bonds and corporate equity securities and that nominal (face) values should be used to value all other financial assets. In either case, account needs to be taken of foreign exchange rates in valuing claims on non-residents, expressed in the non-resident currency, which are held by residents of the country of reference of the balance-sheet accounts.

#### Gold and IMF special drawing rights

6.37. Official holdings of gold are to be valued as in official figures of reserves, at the price for transactions between central banks; but private holdings may be valued at the appropriate free market price if transactors have legal access to this market. The special drawing rights of IMF should be established in accordance with the values assigned by IMF.

#### Short-term bills and bonds

6.38. There are two main types of short-term bills and bonds to be considered: (1) those issued and traded at a discount and redeemed at par, the difference between which is considered to be interest; and (2) those issued at par or at a stated rate of interest.

6.39. The valuation of short-term bills or bonds of the first type at their market value is consistent with the recommendations in the SNA report that receipts of interest should be recorded when due, which in this case is on redemption of the bills or bonds, and that their purchase should be recorded at the amount paid. While this is the correct mode of valuation in principle, it may not be the most appropriate in practice. Most holders and issuers of short-term bills and bonds may record the claims at face value and may, at that time, consider interest to be received (paid). In any case, the difference between market and face values may be small; most of the bills or bonds are usually redeemable within a short interval of time; and for purposes of assessing the liabilities of the issuers, face values are wanted. It is therefore probably best to value the short-term bills or bonds under discussion at face value and to take account of the difference between this value and the discounted value at which they are issued or traded by entering the interest as received (paid) at the time of purchase (issue).

6.40. For short-term bills or bonds issued at par at a stated rate of interest, the reasons for using nominal (face) value are stronger than they are for the short-term bills or bonds discussed in the preceding paragraph. These claims are likely to be traded in the market at par unless there are sharp changes in the going rate of interest. Even then, the differences between their market value and face value will be very small after deduction of accrued interest if it is included in the market values.

#### Long-term bonds

6.41. There is no doubt that purchasers or holders of long-term bonds make decisions about their investment in the bonds in terms of market values. For example, the market value of the bonds approximates the future receipts on redemption - nominal value - of the bonds discounted at the going rate of interest

in the market. The market value of bonds actively traded on organized exchanges is available from quotations of transactions on the exchanges. The transaction values used should not include brokers' commissions or other transfer charges or accrued interest. The market value of long-term bonds for which quotations of transactions on exchanges are not available may be derived by analogy with comparable quoted long-term bonds, taking into account their rate of interest, period to maturity and value on redemption. The issuer and the type of instrument of the quoted long-term bond used should be similar to that of the unquoted long-term bond. The market value assigned to the unquoted bond should reflect its inferior marketability.

#### Corporate equities including capital participations

6.42. The financial behaviour of holders of corporate equity securities, and even their effective demand for goods and services, reflect the market values of these securities. The market value of corporate equities that are traded on organized exchanges may be determined from the quotations for transactions on these exchanges. Care should be taken to exclude any brokers' commissions and other costs of transfers that may be included in these quotations. The market for corporate equities not traded on organized exchanges is usually so narrow that reliable data on market values are usually not available. In the absence of this information, holders of unquoted corporate shares are likely to evaluate the sales prices of the securities in terms of recent and expected dividends and earnings and the general level of prices for comparable quoted securities. Unquoted corporate equities may therefore be valued by analogy with comparable quoted securities, taking into account their ratio of price to earnings and dividends and expected changes in earnings and dividends and allowing for their inferior marketability. The estimated market value of the unquoted equity securities may also be adjusted for the fact that their value usually does not fluctuate as much as do the values of the comparable quoted securities.

#### Subsidiaries

6.43. A special situation arises in the valuation of corporate equity securities of a parent company in its resident or non-resident subsidiaries which are not included in the same statistical unit as the parent. (It should be recalled that, by definition, the parent company should own 50 per cent or more of the corporate equity securities in each of the subsidiaries.) Unlike the usual stockholders, the parent company can take possession of the net worth of the subsidiaries by selling its interest in them. Furthermore, the parent company controls the magnitude of subsidiaries' net worth as it determines the amount of dividends that they pay and thus fixes the amount of saving that they retain. It is therefore appropriate to consider that the subsidiaries do not have any independent net worth and that the value of the parents' equity securities in the subsidiaries is equivalent to the difference between the total value of the subsidiaries' assets less the total value of the subsidiaries' liabilities, including only the value of any minority interests in the case of corporate equity securities. The value of the equity securities held by the minority interests may be determined from the market value of the shares.

#### Proprietors' net equity in quasi-corporate enterprises

6.44. Like subsidiaries, quasi-corporate enterprises should not be considered to have an independent net worth. The proprietors of the enterprises determine the

amounts they withdraw from or add to the capital of the enterprises and can appropriate all of it. The value of the proprietors' net equity in quasi-corporate enterprises is therefore equivalent to the total value of the enterprises' assets reduced by the value of their liabilities, excluding of course the proprietors' net equity. The actual situation of incorporated businesses closely held by only very few stockholders may be very similar to that of quasi-corporate enterprises. In such instances, it may be desirable to allocate the total value of the enterprise, reduced by its liabilities to third parties, among the stockholders in proportion to their holdings of shares in it.

### General aspects of valuing liabilities

6.45. As was noted in paragraph 6.1 above, assigning the same values to each claim as a liability and as an asset makes it possible to estimate simple relationships between items in the balance-sheet accounts. However, the same mode of valuation should be used for liabilities as for the corresponding assets only if the valuation of the assets is realistic and is appropriate for understanding and analysing the financial behaviour and situation of the debtors.

6.46. The common practice in business accounting is to value liabilities at nominal (face) value. This is, no doubt, the most suitable mode of valuation for the liabilities which are the counterpart of the financial assets that are assigned nominal values, for example, deposits, short-term bills and bonds, loans, net equity of households on life insurance and pension fund reserves, trade credit and other accounts payable. It is argued below, however, that for long-term bonds and corporate equities the same valuation should be used as for these claims held as assets, namely, market values. For purposes of analysing the financial situation and behaviour of transactors market values are appropriate for these liabilities.

### Valuing securities as liabilities

#### Long-term bonds

6.47. Valuing long-term bonds at market values is a way of approximating the current discounted value of the future liability to redeem the bonds, based on the going rates of interest in the market. If the remaining period to maturity is very short, say less than a year, market and nominal values will not differ significantly. When market values are used, bonds with different dates of redemption and different interest rates are put on a common basis of time and valuation, which is essential for purposes of adding together and comparing the liabilities of transactors. Furthermore, the time to redemption of long-term bonds and the current rates of interest in the market are important considerations in the financial calculations and behaviour of the issuers. They will take these factors into account in establishing sinking funds for redemption of the bonds. For example, a rise in the market rate of interest or a longer time to redemption will reduce the present value of the future liability to redeem the bonds and the magnitude of the annual additions to the sinking fund. Issuers may also redeem their long-term bonds early when this option is not restricted by the terms of the bonds, if the going rate of interest for long-term bonds is significantly lower than the stated rate of interest of their bonds or if they can obtain more favourable terms from alternative sources of finance, for example, by issuing

common stock or obtaining bank loans. It is therefore proposed that, in general, the same valuation should be used for long-term bonds as liabilities and as assets, namely, market values.

#### Corporate equity securities

6.48. The justification for using market values is not as strong for liabilities in the form of outstanding corporate equity securities as for liabilities in the form of long-term bonds.

6.49. Since, as has been recommended earlier in this paper, an independent net worth should be assigned to corporate units other than subsidiaries, the possible alternative to valuing their outstanding equity securities at market value appears to be to use revalued paid-in value. This is discussed in the subsection below. The paid-in value but not the market value of corporate equity securities is usually given in the business accounts of the issuers of the securities. Market values are, however, more useful than paid-in values for a number of analytical purposes because they have a greater influence on the financial behaviour of corporate enterprises. Studies of the sources and pattern of external finance that incorporated enterprises use furnish an important example of analyses for which the market value of equity securities is more useful than paid-in value.

6.50. Companies favour the issue of equity securities in order to raise needed external funds when the market value of their shares is high and of course set the price of the new issues in terms of the market. They are more likely to use other sources of raising external funds when the market value of their equity securities is relatively low. In fact, they may use retained savings to purchase their own equity securities when the market value of the shares is low in order to increase the ratio of their liabilities in bonds and loans to their outstanding stock, in order to raise their earnings per outstanding share or in order to accumulate treasury stock for payment of employee bonuses etc. The market values of their equity securities are also of interest in studying the circumstances and terms under which mergers or takeovers of incorporated enterprises occur. For example, low ratios of market value to book value for the shares of a company make the company an attractive candidate for merger or takeover. And the relative market values of the outstanding stock of companies involved in a merger or takeover are important in setting the terms of the exchange of stock that usually takes place. The influence of speculative waves and other aberrations in stock exchanges on the market value of equity securities does not seriously limit the usefulness of market valuation for the purposes outlined above.

#### Alternatives to market valuation of long-term bonds and corporate equity securities

6.51. While assigning current market values to long-term bonds and corporate equity securities is valuable for a number of purposes, it cannot be contended that this mode of valuation is useful for all purposes. For example, securities are often valued at cost of acquisition as assets and at nominal (face) value as liabilities. However, although the valuation of securities at cost of acquisition is useful for purposes of each holder, it is not suitable for purposes of the balance-sheet accounts. This is so because the costs of acquisition of a given type of security relate to different times and therefore cannot be combined into useful aggregates for groups of holders of the security. Furthermore, the costs of acquisition of holders of securities would not be meaningful basis of valuation

for the issuers of the securities and the useful equality between the valuation of claims as assets and liabilities would not be preserved.

6.52. The use of nominal value for long-term bonds and of revalued paid-in and equivalent value for corporate equity does not have the disadvantages mentioned in the preceding paragraph. These valuations refer to the same date for each issue of a security and would be meaningful in the analysis of both liabilities and financial assets.

6.53. The nominal and redemption values of long-term bonds are usually identical; the payments to be made on redemption are financially meaningful values to the issuers of the bonds and to the holders who intend to hold the bonds to maturity. Furthermore, the differences between the nominal values and the market values of the bonds indicate the trends in rates of interest in the market since the bonds were issued. The use of nominal values should be practical in the case of both assets and liabilities in the form of long-term bonds.

6.54. The revalued paid-in value of all the outstanding equity securities, excluding treasury stock, of an incorporated enterprise is the sum of the actual amounts paid for sold issues of shares and the value of their issue as dividends and bonuses, revalued in terms of the current market prices of the assets of the enterprise. The use of these values for equity securities and nominal (face) values for liabilities to third parties, in combination with the market valuation of assets, results in a concept of net worth which is equivalent to the accumulated retained earnings and capital gains of the enterprises, valued in terms of current market prices of the assets. This definition of net worth is closely related to the concept of accumulated capital that is used in business accounting. It yields figures of net worth that are indicative of the successfulness of companies and of their dividend policies and the role of internal financing. The relationship between the revalued paid-in values and market values of the equity securities of incorporated enterprises is also of analytical interest.

6.55. It should be feasible to compile the revalued paid-in values of the liabilities of incorporated enterprises to second parties without undue difficulty from data gathered from, and compiled for, enterprises. This is not so for the revalued paid-in values of the equity securities held as financial assets. It will be necessary to identify the enterprise in which the shares are held in order to determine the value per share for the enterprise.

#### Consumer and military durables

6.56. In paragraphs 3.4 and 3.5 above, it was proposed that a supplementary table should be compiled on holdings of major consumer and military durables. These holdings may, in general, be valued at written-down replacement cost. There is a strong case for estimating the depreciation of consumer durables according to the declining balance approach as this yields a closer approximation to the sharp drop in the market value of a number of these durables during their early years of use. For some consumer durables, such as second-hand automobiles, for which there are well organized markets, market values instead of written-down replacement cost may be used. The declining balance approach may also be useful in estimating the depreciation of military durables. It should be noted that unforeseen obsolescence, which should be included not in depreciation but in entries reconciling the value of closing stocks with the sum of the values of opening stocks and transactions, is a major factor in the changes in the value of military durables during a year.

## Chapter VII

### ENTRIES IN RECONCILIATION ACCOUNTS

#### The nature of the entries

7.1. The function of the reconciliation accounts is to portray all the differences between the opening and closing assets and liabilities on balance-sheet accounts which are not covered on the capital finance accounts. These differences may be divided into the following major categories: (1) revaluations due to price changes, (2) adjustments due to unforeseen events, (3) net increases in the value of tangible assets not accounted for in the capital finance accounts, (4) adjustments due to structural changes and (5) statistical discrepancies and discontinuities. The nature of the first category of entries in the reconciliation accounts is obvious; these entries account for most of the realized and unrealized capital gains and losses between opening and closing balance-sheets. The entries in the second category of reconciliation items are designed to take account of (a) realized losses in fixed assets which cannot be anticipated and therefore are not covered in the capital finance accounts and (b) certain other realized capital losses or gains which cannot be foreseen. It is necessary to include the third category in the reconciliation accounts primarily because changes in stocks of non-reproducible tangible assets are excluded from the capital finance accounts. The last two categories of reconciliation entries concern adjustments to the values of assets and liabilities which arise from shifts in the structure of institutions not covered in the capital finance account and/or changes in statistical treatment.

7.2. The reconciliation items may also be considered from a somewhat different point of view in relationship to entries in the capital finance accounts. The differences in value between succeeding balance-sheets may be decomposed into elements of price changes, of the coming into existence (birth) and the passing out of existence (death) of assets and liabilities and of changes in institutional structure and statistical treatment. Changes in prices and in statistical treatment are all shown in the reconciliation accounts; these accounts must also accommodate all births and deaths and changes in institutional structure which are not covered in the capital finance accounts.

7.3. The capital finance accounts cover all births and deaths quite satisfactorily for most financial assets and liabilities, for stocks and for reproducible tangible assets except livestock classed as fixed assets. In the latter case, gross fixed capital formation provides for births; deaths are in principle recorded through capital consumption. Gross fixed capital formation also includes certain entries which relate to initial expenditures only, for example, on improvements to land and on the development and expansion of plantations; depreciation is not charged against these assets. Increases in the value of land come from price changes only; increases in the value of capital assets in the form of plantations come, in addition, through natural growth. The capital finance accounts provide for the birth (purchase and sale) but not the death of non-financial intangible assets; the ending of purchased copyrights, patents etc. must be covered in the reconciliation accounts.

7.4. The capital finance accounts cover the births and deaths in assets and liabilities resulting from the founding, liquidation and most acquisitions and sales of enterprises. The accounts do not cover the disappearance or appearance of certain financial assets and liabilities because of expansion or contraction in the consolidation of existing business units into statistical units. These changes may be due to a parent company acquiring or divesting subsidiaries or simply to the redefinition of the units used for statistical purposes. Nor do the capital finance accounts record many of the shifts in the classification of assets and liabilities according to institutional sector or subsector as a result of, for example, the reclassification of statistical units. The effects of such shifts therefore need to be covered in the reconciliation accounts.

#### The detailed classifications

7.5. Reconciliation entries are classified according to their cause in table 7.1. Table 7.2 relates the various causes of reconciliation to the types of asset and liability affected and shows how these depend on the nature of the entries in the capital finance accounts.

#### The purpose and application of the detailed categories of items of reconciliation according to use

7.6. Discussed below are the purposes of the detailed categories of the classification in table 7.1 of entries in the reconciliation accounts according to cause and their use in respect of the classes of assets and liabilities listed in table 7.2.

#### Revaluations due to price changes

7.7. The first three categories of revaluations due to price changes are designed to distinguish the basis on which these revaluations are made. Market values are, in general, suggested as the principal basis for revaluing holdings of land and stocks and assets and liabilities in the form of long-term bonds and corporate equity securities. Market values, i.e., sales receipts, are also automatically applied in valuing any differences between the sales receipts and the values recorded in the opening balance-sheets, in the case of the sale of tangible capital assets, non-financial intangible assets and financial assets during the period between opening and closing balance-sheets. Market values, i.e., redemption payments, are also used for the payment or liquidation of liabilities. Replacement costs are to be used for most types of reproducible tangible assets and their depreciation. It should be noted that the replacement costs at the date of a balance-sheet should be used in revaluing the accumulated allowances up to that time for the consumption of fixed capital. Capitalizing streams of income are likely to be the principal way of valuing subsoil deposits and timber tracts. The last category of price revaluations - foreign exchange rates - is of course relevant for financial assets and liabilities denominated in foreign currencies.

#### Adjustments due to unforeseen events

7.8. Allowances for the consumption of reproducible fixed assets do not cover unforeseen obsolescence in these assets and the amount included for their normally

Table 7.1. Classification of items of reconciliation  
according to cause

- 
- 13.1 Revaluations due to price changes
    - 13.1.1 Market prices
    - 13.1.2 Replacement costs
    - 13.1.3 Rate of discount or capitalization factor
    - 13.1.4 Foreign currency exchange rates
  - 13.2 Issue of IMF special drawing rights
  - 13.3 Adjustments in respect of unforeseen events
    - 13.3.1 Unforeseen obsolescence
    - 13.3.2 Differences between allowances included in capital consumption for normal damage to fixed assets and actual losses
    - 13.3.3 Transfers to net equity of households on reserves of life insurance and pension funds
    - 13.3.4 Uncompensated seizure of assets
  - 13.4 Net changes in value of tangible assets not accounted for in the capital finance accounts
    - 13.4.1 Natural growth less depletions
      - 13.4.1.1 Breeding stock, draught animals, dairy cattle and the like
      - 13.4.1.2 Timber tracts and forests
      - 13.4.1.3 Plantations, orchards and vineyards
      - 13.4.1.4 Fisheries
    - 13.4.2 New finds less depletions of subsoil assets
    - 13.4.3 Losses in land and timber tracts in catastrophes and natural events
  - 13.5 Adjustments due to changes in structure and classification
    - 13.5.1 Changes in the institutional sector or subsector of owners
    - 13.5.2 Acquisition or divestment of subsidiaries and consolidation or decomposition of statistical units for other reasons
    - 13.5.3 Changes in the classification of entries
  - 13.6 Termination of purchased patents, copyrights, trade-marks etc.
  - 13.7 Statistical discrepancies and discontinuities
-

Table 7.2. Analysis of items of reconciliation according to entries in the capital finance accounts and according to the type of asset or liability to which they apply

Entry in capital finance accounts	Type of asset or liability (item numbers from tables 5.1, 5.2 or 5.3)	Reconciliation (item numbers from table 7.1) <u>a/</u>
<u>Tangible assets</u>		
Gross fixed capital formation less consumption of fixed capital	Fixed assets 10.2.1 through 10.2.3, 10.2.5 and 10.2.6	13.1.2, 13.3.1, 13.3.2
Gross fixed capital formation for initial outlays	Land improvements and plantations, orchards and vineyards (10.2.4*) Timber tracts and forests (10.2.4*)	13.1.1, 13.1.3, 13.4.1.3, 13.4.3 13.1.1, 13.1.3, 13.4.1.2, 13.4.3
	Breeding stock, draught animals, dairy cattle etc. (10.2.7)	13.1.1, 13.4.1.1
Net purchases of land	Land (11.1) Timber tracts and forests (11.2) Subsoil assets (11.3)	13.1.1, 13.1.3 13.1.1, 13.1.3 13.1.1, 13.1.3, 13.4.2, 13.4.3
	Fisheries (11.4)	13.1.1, 13.1.3, 13.4.1.4
Increase in stocks	Stocks (10.1)	13.1.1
<u>Non-financial intangible assets</u>		
Net purchases of intangible assets, n.e.c.	Non-financial intangible assets	13.6
<u>Financial assets and liabilities</u>		
Gold and IMF special drawing rights	Gold and IMF special drawing rights (8.1)	13.2
Bonds, long-term	Bonds, long-term (8.5 or 9.5)	13.1.1
Corporate equities, including capital participations	Corporate equities including capital participations (8.6 or 9.6)	13.1.1
Net equity of households in reserves of life insurance and pension funds	Net equity of households on life insurance reserves and on pension funds (8.9 or 9.9)	13.3.3
Proprietors' net addition to accumulation of quasi-corporate enterprises	Net equity in quasi-corporate enterprises (8.10 or 9.10)	13.1.1
All other claims	All other claims (8.2 through 8.4, 8.7 and 8.8, 8.11 through 8.13; or 9.2 through 9.4, 9.7 and 9.8, 9.11 through 9.13) carried at nominal (face) values	No specific reconciliation items

a/ Reconciliation item 13.1.4 is applicable to claims in foreign currencies held or issued by residents; reconciliation item 13.3.4 is applicable to any kind of asset; reconciliation items 13.5.1, 13.5.2, 13.5.3 and 13.7 are applicable to any type of asset or liability.

expected damage may fall short of the actual damage. Adjustments must therefore be made in the reconciliation accounts for the decline in the value of the reproducible capital assets due to these events.

7.9. It was noted in paragraph 5.32 above that mutual insurance companies may transfer realized and perhaps unrealized capital gains on their investments to their policy holders' reserves when these gains are considered to be permanent. Pension funds follow the same practice. When these unforeseen transfers occur entries are required in the reconciliation accounts in order to adjust the households' equity on life insurance or pension fund reserves. It should be noted that while the capital gains in question are due to the revaluation of the investments of the companies or funds, the timing of the transfers cannot be foreseen. The mutual life insurance companies may, however, pay out their realized capital gains in the form of reversionary cash bonuses to the policy holders. The payment is then recorded as a capital transfer in the capital finance accounts and no adjustment entries are required in the reconciliation accounts. For technical reasons it is common for part of the transfer to policy holders to take the form of a terminal bonus, payable on all policies maturing within a specified period. To the extent that this bonus is payable on death claims, a conceptual difficulty arises because no policy holder can foresee the date of his death. The difficulty is best ignored in practice.

7.10. Adjustment entries in the reconciliation accounts are also needed when Governments take possession of the assets of individuals or companies without compensation for reasons other than the payment of taxes, fines or similar levies. Although such seizures of assets may be recorded as capital transfers in the capital finance accounts, it seems preferable to treat them as capital losses. If the individuals or companies are compensated for the transfer of the assets, the events will be recorded in the form of transactions on the capital finance account. It is suggested that if the compensation falls substantially short of the market or related values of the assets, the difference should be recorded in the adjustment entry for uncompensated seizures of assets.

#### Net increases in value of tangible assets omitted from capital finance accounts

7.11. Although the initial outlays on acquiring livestock treated as fixed assets, for example, breeding stocks, draught animals, dairy cattle, and the initial outlays on developing and expanding timber tracts, plantations, orchards and vineyards, and fisheries are included in gross fixed capital formation, the natural growth and depletions in these assets are not covered in the transactions of the capital finance accounts. Outlays on improvements of land are treated as gross fixed capital formation but provision is not made for deducting the sweeping away of land by tidal waves and other catastrophes. Reductions in the usefulness of land because of erosion, waterlogging and advance of deserts and other arid areas should be covered in the reconciliation accounts as reduction in the market value of the land. Similarly, upgrading in the usefulness of land which is not due to outlays on improvement should be recorded as increases in market values. The reconciliation accounts furnish the means of recording the value of new finds of subsoil assets reduced by the value of depletions. Revaluations of subsoil assets may also take place for such reasons as the rise in the market price of minerals or the development of more efficient techniques of exploiting the subsoil deposits. The aforementioned figures on land and on mineral reserves are of considerable interest in dealing with the environmental problems and the efficient management of these natural resources.

7.12. Though the decomposition of changes in the value of the capital assets in question into an element of natural growth or new finds reduced by depletions and an element of price change is quite clear conceptually, difficulties may be encountered in practice in disentangling these two elements. This will be so especially when the changes in value of the capital assets under discussion are estimated as the difference between closing balance-sheets and the sum of opening balance-sheets and the relevant capital transactions. In order to decompose the differences into the two elements it will at least be necessary to have weighted index numbers of the change in prices or in quantities between the opening and closing balance-sheets for each of the assets in question.

#### Adjustments due to changes in structure and classification

7.13. Changes in the holdings of assets and liabilities ascribed to the various institutional sectors and subsectors due to the birth or death of enterprises and other institutional units are included in capital transactions. This is also so in the case of many sales (purchases) of enterprises. The birth of enterprises gives rise to purchases of assets and issuance of liabilities; the liquidation of enterprises results in sales of assets and redemptions of liabilities; the sale (purchase) of enterprises involves exchanges in financial assets and perhaps in liabilities. In the case of the liquidations or the sales (purchases), the values at which transactions in assets or liabilities are carried out may differ from those shown in the transactors' opening balance-sheets for the period in question. Such differences in values would be recorded in the reconciliation accounts as revaluations due to price changes.

7.14. However, the entries in capital finance accounts do not account for all changes in the balance-sheets for institutional sectors and subsectors that are brought about by changes in the structure of institutional units. For example, if as a result of a purchase (takeover) an independent enterprise becomes a subsidiary of the purchasing unit and is therefore consolidated with the parent into a single statistical unit, the equity securities of the subsidiary held by the parent unit will disappear from the balance-sheet accounts without a counterpart entry in the capital finance accounts. If a parent unit sells (divests itself of) a subsidiary, the equity securities it still holds in the enterprise will appear in the balance-sheet accounts without a corresponding capital transaction. Adjustment entries in the reconciliation accounts are therefore required in respect of the aforementioned changes in the structure of institutional units. Other kinds of structural changes in institutional units that demand adjustment entries are the incorporation of previously unincorporated enterprises or vice versa. In these instances, the institutional sector in which the assets and liabilities of the enterprises are classified changes without any entries in capital transactions except for the issue or withdrawal of corporate equity securities. Adjustment entries would also be required even when statistical units or items used in the balance-sheet accounts are reconstructed or reclassified for reasons other than structural changes in institutional units. An example is the division of the value of land, buildings or subsoil assets between owners and users of certain types of leases or concessions.

### Termination of purchased intangible non-financial assets

7.15. The purchases (sales) of patents, copyrights, trade-marks and similar intangibles, but not the termination of these purchased rights, are recorded in the capital finance accounts. As a consequence, provision must be made for recording their termination in the reconciliation accounts.

### Statistical discrepancies and discontinuities

7.16. Those differences in entries between the opening and closing balance-sheets that cannot be accounted for by transactions and the appropriate revaluations and adjustments should be treated as statistical discrepancies. A statistical discrepancy may be due to unknown inaccuracies or inconsistencies in any of the aforementioned items of data or to known deficiencies which it is not feasible to correct. The former type of statistical discrepancy is more likely to occur when different sources of basic data are used to estimate the balance-sheet and linking figures. Known deficiencies in the estimates which cannot feasibly be corrected may be due to such factors as sampling errors or biases caused by non-response in gathering basic data from enterprises and other transactors.

7.17. Discontinuities in estimates between opening and closing balance-sheets may arise from changes in the sources of data, in the scope or representativeness of the sources or in methods of estimation. It would be desirable to make estimates for the closing balance-sheets based on both the old and new methods and show the difference under discontinuities.

## Chapter VIII

### STANDARD ACCOUNTS AND TABLES

8.1 This chapter is concerned with the proposed standard accounts and supporting tables on balance-sheets and reconciliation items. The accounts and tables and associated notes are set out in annexes VIII.2 and VIII.3. Annex VIII.1 gives the codes used to identify the balance-sheet and reconciliation accounts and the entries in them. The codes are designed to be consistent with those used in the transaction accounts and supporting tables as well as to show the place of various assets and liabilities and reconciliation items, and links between them. The text of this chapter is devoted to discussing the purposes, uses and structure of the standard accounts and supporting tables on balance-sheets and reconciliation entries and the periodicity with which and manner in which they may be used in presenting data. The orders of priority in which the various balance-sheet and reconciliation accounts and tables may be compiled is dealt with in chapter IX, in conjunction with the discussion of the bases for and methods of estimating these data.

#### The purpose of the standard accounts and tables

8.2 The proposed standard balance-sheet and reconciliation accounts (annex VIII.2) are intended to delineate basic features of these accounts and their role in the system of national accounts and to furnish guidance on the presentation, international and national, of the main items of balance-sheets and of the reconciliation between closing balance-sheets, on the one hand, and the opening balance-sheets and capital transactions, on the other. The standard supporting tables to the balance-sheet and reconciliation accounts are designed to portray certain facets of the system which are not shown in the accounts, namely, the accounts on specific categories of assets and liabilities, the detailed schemes of classification and the financial links between residents and the rest of the world. The standard accounts consist of the accounts of resident institutional sectors only and the claims between them and the rest of the world are not distinguished from those between resident units. The main purpose of the standard tables, however, is to exhibit the series of detailed balance-sheet data which should be compiled for national and international use but which cannot be conveniently presented in the form of accounts.

8.3 The standard tables (annex VIII.3), in calling for tabulations of data of considerable interest for purposes of economic analysis and policy making, supplement the standard accounts in a number of ways. <sup>1/</sup> Tables 31, 32 and 33 concern the balance-sheet and reconciliation accounts of the subsectors of the institutional sectors and table 30 is designed to combine the accounts of the subsectors into balance-sheet and reconciliation data for private and public

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<sup>1/</sup> The tables in the present publication are numbered 29-36; they continue the series of tables in the SNA report, numbered 1-28.

institutions. Table 29 calls for the detailed classifications of the assets and liabilities of a nation as a whole and table 34 details each category of financial assets and liabilities according to the creditor and debtor sectors and subsectors. Table 35 is designed to delineate the financial assets and liabilities of resident institutions in respect of the rest of the world. Also included is a supplementary table on consumer and military durables which is not part of the balance-sheet and reconciliation accounts.

8.4. The standard balance-sheet and reconciliation accounts and tables in this publication, which add tables on stocks to the flow tables of the SNA report, are intended to furnish international guidance for the national development of balance-sheet statistics. It is recognized that few, if any, countries are now in a position to compile the wealth of data listed in the accounts and tables. National statistical authorities will need to develop balance-sheet and reconciliation data gradually, in the light of the requirements and statistical circumstances of their countries. The international reporting of balance-sheet data must of course be tied to the availability of national data. International reporting must therefore wait until a significant number of countries compile balance-sheet data on a regular basis. Countries will, in this work, probably give different orders of priority to institutional sectors. It will therefore be essential initially, and as national work on balance-sheets proceeds, to consider the institutional sectors to be covered in the international reporting of the data. It may also be necessary to be selective with regard to the scope or detail of classification of the assets or liabilities for which internationally comparable data are sought. The selection should of course be made in the light of the availability of national data and the requirements for international information.

8.5. The manner in which the balance-sheet and reconciliation data are grouped and arranged may differ from one situation to another, depending on the purposes for which the series of data are estimated and published. The primary guidance which the standard accounts and tables are intended to give therefore concerns the data to be compiled. The standard accounts and tables are designed to furnish guidance, in addition, on the way in which the balance-sheet and reconciliation data may be organized and arrayed so as to exhibit the structure of, and relations between, holdings and revaluations of assets and liabilities.

#### The character and structure of the standard accounts

8.6. Here the character and structure of the standard balance-sheet and reconciliation accounts are discussed in the light of the analytical purposes which they are intended to serve and in the light of SNA, into which they are designed to fit. Attention will be called to certain differences between the standard accounts proposed here and the matrices and accounts set out in chapter II of the SNA report.

#### General considerations

8.7. The standard balance-sheet and reconciliation accounts set out in annex VIII.2 are divided into two classes of accounts. The balance-sheet and reconciliation accounts for the nation, in combination with the transaction accounts for the nation presented in annex 8.2 of the SNA report, complete the consolidated accounts for the nation (I accounts). Similarly, the balance-sheet and reconciliation accounts

(VII accounts) for institutional sectors supplement institutional sectors' capital finance accounts (III accounts). As in the case of the capital finance accounts in the SNA report, the combination of the balance-sheet and reconciliation accounts for the various institutional sectors yields the balance-sheet and reconciliation accounts for the nation. It will be desirable to supplement these accounts for the nation with balance-sheet, capital finance and reconciliation accounts which restrict the entries on financial claims to those between residents and non-residents. This question is discussed further below.

8.8. All the balance-sheet and reconciliation accounts have been designed so that the entries in the opening balance-sheets at the beginning of a period plus the sum of the corresponding items in the capital finance and reconciliation accounts for the period equal the entries in the closing balance-sheets at the end of the period. Leases and concessions in respect of structures and land, subsoil assets and other non-reproducible tangible assets are included in fixed assets and non-reproducible tangible assets in the balance-sheet accounts but in net purchases of non-financial intangible assets in the capital finance accounts; therefore it is necessary to reclassify the purchases and sales of leases and concessions during the period in the reconciliation accounts in order to maintain the links between the accounts on stocks and the accounts on flows.

8.9. Each balance-sheet and reconciliation account balances since the entry on net worth is equivalent to the difference between the sum of the items on assets and the items on liabilities. For certain analytical purposes, for example, for evaluating the financial soundness of incorporated enterprises, it is desirable to study the difference between the value of enterprises' holdings of assets and the value of their liabilities to third parties, that is, liabilities excluding equity securities and other capital participations. Unlike the matrix and the illustrative balance-sheets in chapter II of the SNA report (tables 2.1, 2.15 and 2.16), the tables and accounts in this publication divide liabilities into those to third parties and those to second parties, that is, to holders of equity securities and capital participations, and an item on the sum of liabilities to second parties and net worth has been included in all the balance-sheet and reconciliation accounts. This residual is likely to be more stable than the residual "net worth". A third identity in the accounts is that the same value is assigned to a financial claim as an asset and as a liability. Thus, for a given category of claims, the total assets of residents and of the rest of the world in respect of residents is equivalent to the total of the liabilities of residents and of the rest of the world to residents.

#### The accounts for the nation

8.10. The consolidated accounts for the nation set out in annex VIII.2 repeat the capital finance account from the SNA report and also delineate opening and closing balance-sheets as well as a reconciliation account, in order to illustrate the way in which the balance-sheets are linked by the other two accounts. The capital finance account has been rearranged somewhat as compared to that presented in annex 8.2 of the SNA report in order to show clearly its correspondence with the balance-sheets and the reconciliation account. It covers capital transactions that correspond to all of the items of the latter accounts except "land, timber tracts, subsoil assets and other non-reproducible tangible assets". That item is omitted because the corresponding entry in the capital finance account - purchases minus sales of land, subsoil assets and other non-reproducible tangibles - is equivalent to nil in the case of the consolidated accounts for the nation. By definition,

resident institutions only make these purchases and sales. The capital finance entry "saving and net capital transfers from the rest of the world" is the counterpart of the item "net worth" in the balance-sheet and reconciliation accounts.

8.11. The opening and closing balance-sheet account of accounts I are primarily designed to portray the structure, in broad outline, of the assets and liabilities of a nation and to measure its wealth. Comparisons between the opening and closing balance-sheets of course show the changes over the accounting period; the events that led to the changes are recalled in the capital finance and reconciliation accounts. In order to serve this purpose best, the consolidated accounts for the nation represent a combination rather than a consolidation of the balance-sheet and reconciliation accounts for the various institutional sectors. Combination of the latter accounts is also more convenient. If these accounts were to be consolidated it would be necessary - but might be too difficult initially - to separate financial claims between residents and non-residents from those between residents. The sole difference between the combination of the accounts and their consolidation occurs for financial claims; only financial assets in respect of, and liabilities to, the rest of the world would be shown if the accounts were consolidated. The consolidated balance-sheets of a nation thus indicate that its national wealth is equivalent to the sum of its tangible assets and its financial assets in respect of the rest of the world reduced by its liabilities to the rest of the world. This definition usefully focuses attention on the creditor/debtor position of a nation. It is therefore desirable to supplement the main accounts on balance-sheets, capital finance and reconciliation for the nation as a whole with a set of accounts that clearly exhibit the financial claims between it and the rest of the world. The adjustments required in the consolidated accounts for the nation are set out in the notes to annex VIII.2.

#### The accounts of the institutional sectors

8.12. In the standard accounts for the institutional sectors (VII accounts) only closing balance-sheets and reconciliation accounts are set out, since the opening balance-sheets would be identical to the closing balance-sheets for the previous period and the capital finance accounts would appear in the standard transactions accounts for the period in question. The proposed detail in the classification of tangible assets and financial claims in the VII accounts varies from one institutional sector to another but is greater than that for the I accounts. It has been adjusted to the expected assortment and importance of the various items in the balance-sheets of each institutional sector and the differences in analytical requirements for the data. The suggested classification of financial claims for each institutional sector is tailored to the assortment of claims usually held and the requirements for information.

#### Non-financial enterprises, corporate and quasi-corporate

8.13. Non-reproducible tangible assets and financial claims are classified in substantial detail for non-financial corporate and quasi-corporate enterprises because they are important items in the holdings and consequently in the analysis of the soundness and behaviour of these enterprises. For the same reasons, it may be desirable to present a classification of the fixed assets of the enterprises in their VII accounts and distinguish selected financial claims into those between residents only and those between residents and non-residents.

8.14. For example, holdings of agricultural land and timber tracts are important in assessing the resources for production of corporate and quasi-corporate enterprises engaged in extracting and processing agricultural and forest products; holdings of subsoil assets are of course essential to the activities of mining companies. The assortment of liabilities of non-financial companies portrays their relative dependence on internal and external sources of finance and their financial soundness and leverage. The magnitude and composition of financial assets relative to that of tangible assets are indicative of their surplus funds for expanding production and their liquidity. The figures of stocks and trade credit and advances are also of interest in assessing their needs for working capital. Furthermore, detailed data on the tangible assets and financial claims of non-financial companies are wanted in studying their distribution among the institutional sectors and, for financial claims, in studying their position in relation to the rest of the world.

#### Financial institutions

8.15. It is necessary to classify financial institutions' holdings of financial assets and liabilities in greater detail than those of other institutions. The classification must be detailed in order to furnish information for the analysis of such matters as the role and importance in the economy of financial intermediaries, the supply of money and quasi-money to the economy, the monetary base and bank reserve ratios, and the amount and liquidity of financial claims in respect of the rest of the world. A detailed classification of the financial claims held by financial institutions is also needed in order to study their liquidity and portfolio behaviour. Figures from the balance-sheets of monetary and other financial institutions are, in addition, used in building financial models and, in the absence of other data, to assess the financial holdings and behaviour of the rest of the economy. For the latter purpose, it is desirable to supplement their combined balance-sheet and reconciliation accounts with consolidated accounts.

8.16. A detailed classification of the tangible assets of financial institutions is not needed. These assets are often incidental to the main activities of the institutions and account for an insignificant part of the tangible assets of the nation. This is not so, however, when banks engage in the leasing of capital goods or insurance companies engage in direct investment in real estate. Data on the holdings of tangible assets by financial institutions are, in any case, of interest in assessing their liquidity.

#### General government

8.17. As government bodies, in particular the central government, often own and control the use of a substantial part of the land, timber tracts and mineral assets of their country, the VII accounts for general government calls for a classification of non-reproducible tangible assets into their main categories. The treasuries of ministries of finance of Governments sometimes serve as the monetary authority and hold the international reserves of a country and a number of Governments furnish finance for industrial, electricity, housing and transport and other enterprises of their country. For these reasons it is important to classify the financial assets of general government in some detail. As the liabilities of government bodies are usually restricted to certain types of instruments, it is suggested that fewer detailed categories be used in their classification than in the classification of financial assets.

8.18. The proposed VII accounts for general government combine the corresponding accounts of central government, the state and local governments and the social security funds of a nation. A significant portion of the liabilities of the state and local governments may be to the central Government, which may play an important role in determining their financial practices. Moreover, the financial assets of social security funds are often the liabilities of the central Government, which determines the assortment of these financial assets. In view of this and in order to assess the financial role of general government in the economy, it is desirable to supplement the combined VII accounts with consolidated accounts.

#### Private non-profit institutions serving households

8.19. In some countries, private non-profit institutions, such as universities, hospitals, medical research institutes and foundations, have substantial endowments which they invest in securities and deposits. These financial assets are therefore shown separately in the VII accounts for the institutions, while the other financial assets except currency and transferable deposits are grouped together. On the liability side, it is thought worth while to distinguish loans from other liabilities. It appears to be sufficient to classify tangible assets into stocks, fixed assets and non-reproducible tangible assets. Structures are likely to be the most important fixed assets owned by private non-profit bodies.

#### Households, including private unincorporated non-financial enterprises

8.20. As private unincorporated non-financial enterprises are included in this institutional sector, it is important to include a detailed classification of the non-reproducible tangible assets for purposes of assessing the resources of such agricultural, timber extracting, mineral and fishery enterprises. These unincorporated enterprises and the households owning real estate may also possess a significant portion of the non-reproducible tangible assets of a country. As households are an important source of funds for investment and other uses, information on their assets is wanted for studies of their portfolios of financial assets and their liquidity preferences. Detailed classification of their financial assets is therefore suggested in the VII accounts of households. On the other hand, as the forms in which households may contract liabilities are few in number, the list of liabilities set out in their VII accounts is short. Figures of the net worth of households are of considerable interest in assessing the distribution of the wealth of a nation.

#### The character and structure of the supporting tables

##### 1. General considerations

8.21. The main purpose of the proposed supporting tables to the VII accounts (tables 29-36, in annex VIII.3 below) is to furnish the more detailed information on the balance-sheets and reconciliation items that it is not convenient to show in the form of accounts. In carrying this out, the supporting tables delineate the classifications of balance-sheet and reconciliation items in greater detail than is feasible in the accounts. Some of the tables also portray certain aspects of structure that are not set out in the balance-sheet and reconciliation accounts, for example, the balance between the financial assets and liabilities in each type of claim.

8.22. For the sake of convenience the standard tables in annex VIII.3, except table 29, deal with closing balance-sheets and reconciliation items only. Opening balance-sheets would of course contain the same items as closing balance-sheets; and the capital-finance data, which together with reconciliations link opening and closing balance-sheets, would be shown in standard tables on transactions. In publication it may be desirable to show data both on opening and closing balance-sheets and on capital finance and reconciliations.

#### The standard tables for the nation

##### Table 29

8.23. Table 29 is designed to detail the assets and liabilities of the nation that are summarized in the consolidated accounts of the nation. Unlike the other standard tables, it calls for data on opening stocks and on the transaction links between opening and closing stocks. It also presents the classifications of tangible assets, but not the classification of claims, in full detail. If feasible, it is advantageous to show the financial assets held on, and liabilities to, the rest of the world in this and certain other standard tables. In this and other standard tables, foot-notes should be given on the face values of long-term bonds as liabilities and on corporate equity securities as liabilities and net worth, each revalued in terms of the revaluation of assets.

##### Table 34

8.24. This standard table furnishes a matrix of the financial assets and liabilities of the nation. It is designed to portray the details of (a) the creditor-debtor relationships between institutional sectors and between resident institutions and the rest of the world, as well as the amounts outstanding of each kind of claim; and (b) the international reserves and offsets to these reserves of the nation. The classification of claims and of institutional sectors is the same as that of the matrix in table 24 of the SNA report, on transactions in financial assets and liabilities.

8.25. The classification of claims is to be shown in full detail in the upper panel of the table; the classification for the institutional sectors in respect of financial institutions and general government is also elaborated. Details on the subsectors of the former sector are of special importance in view of their roles as financial intermediaries. The table will thus exhibit the amounts outstanding and the creditor-debtor relationships for each type of claim. In order to show this, as well as to show the identity between the value of the financial assets and the value of the liabilities for each type of claim, columns on the rest of the world are included in the table.

8.26. The lower panel of table 34 relates to the claims between residents and the rest of the world only; attention is focused on those claims which make up the international reserves and offsets to these reserves of the nation. While practically all of these claims will be the financial assets and liabilities of the central bank and treasury of a nation, other resident institutions may have financial assets or liabilities that should be included. The international reserves and offsets held by the central bank or treasury of a nation cannot be uniquely defined in terms of categories of claims; they must in general be

distinguished from other holdings in the same kind of claim, instrument by instrument. It should be emphasized that the definitions of international reserves and offsets to be used in table 34 are established by the International Monetary Fund.

#### Table 35

8.27. This table focuses on the financial assets of, and liabilities to, the rest of the world of residents; it is thus designed to summarize the data called for in the columns on the rest of the world in table 34. Like table 34, the table consists of two panels - one on all foreign financial assets and liabilities and the other on international reserves and offsets thereto.

#### The standard tables of the institutional sectors and subsectors

8.28. Standard tables 30 through 33 are designed to support accounts VII on the balance-sheet and reconciliation entries of the institutional sectors. Table 30 is designed to accumulate the data for the subsectors on private and public institutions in each of the institutional sectors; tables 31 through 33 are intended to be used to show the data for key subdivisions of selected institutional sectors. Tables on financial institutions and private non-profit institutions serving households are not included among these tables because table 34 calls for the data that are of importance for the subsectors of financial institutions and because there are no subsectors for private non-profit institutions.

#### Table 30

8.29. This table represents an extension of table 19 of the SNA report, on the capital transactions of private and public institutions; it presents their closing holdings and the reconciliation entries that together with the capital transactions link their opening and closing balance-sheets. While the detail in classification of financial claims is the same in both tables, it is greater for non-reproducible tangible assets in table 30. A more detailed classification of the latter assets is proposed in table 30 because of the considerable interest in whether the natural resources of a country are owned and controlled by the private or the government sector. The entries in table 30, except those on proprietors' net equity in non-resident quasi-corporate corporations, are to be compiled by combining the corresponding entries for the private and public statistical units in each of the relevant institutional sectors; the sectors for households, including unincorporated enterprises and private non-profit institutions serving households, of course consist of only private institutions and the sector for general government is made up of only public institutions. It may be advantageous to compile a supplement to the table consolidating the claims between general government and non-financial and financial public enterprises.

#### Tables 31 through 33

8.30. The classifications of non-reproducible tangible assets and of financial claims in each of these tables are tailored to reflect the pattern of holdings and reconciliation items of the institutional sector covered. In general, these classifications are the same as in the standard accounts which the tables support.

The differences between these tables and the corresponding accounts consist of the subdivision of the institutional sectors shown in the accounts.

8.31. Because of the important differences in the mix of reproducible and non-reproducible tangible assets and financial claims held by non-fictional corporate and quasi-corporate enterprises engaged in different kinds of economic activities, it is proposed in table 31 that manufacturing enterprises should be subdivided according to divisions, and enterprises in other kinds of economic activity according to major divisions, of the International Standard Industrial Classification (ISIC). This classification according to kind of activity is also recommended in standard table 20 of the SNA manual on the capital and income and outlay transactions of the corporate and quasi-corporate non-financial enterprises. While the detail in classification in tables 31 and 20 is the same for financial claims, it is more detailed in table 31 for non-reproducible tangible assets. A more detailed classification is proposed in view of the requirements for data on holdings of natural resources, in order to deal with exploitation and with environmental and other questions.

8.32. For the same reasons, the classification of non-reproducible tangible assets in standard table 32, on the closing balance-sheet and reconciliation entries of the subsectors of general government, is more detailed than in table 21 of the SNA report on government transactions in capital and income and outlay. The detail in classification of other items is the same in the two tables. The detail in classification of assets and liabilities in table 32 is identical with that in its parent account VII C.

8.33. Table 33, on the closing stocks and revaluations of the holdings of subsectors of households, including unincorporated enterprises, is correlated with table 23 of the SNA report, on their capital and income and outlay transactions. However, while in both tables a distinction is drawn between households with owners of unincorporated agricultural enterprises and households with owners of unincorporated non-agricultural enterprises, in table 33, the subsectors for employees and persons in other status are combined. The proposals for subsectoring in table 33 are less detailed than those in table 23 of the SNA report because it is thought that significant differences would exist in the mix of assets and liabilities between the three kinds of households distinguished but not between the households of employees and of persons in other status. Like the supporting tables for subdivisions of other institutional sectors, table 33 calls for the same detail in classification of financial claims as does table 23 of the SNA report but greater detail for non-reproducible tangible assets. The detail in the classification of assets and liabilities is the same in table 33 as in account VII E, which it supports.

#### A supplementary table

8.34. A supplementary table on the opening and closing stocks of major consumer and military durables is included in annex VIII.3 (table 36). In addition to figures of the value of these stocks, the table calls for data on the links between the two values: gross additions to, and depletions in, the stocks during the period (final consumption expenditure in SNA and depreciation and obsolescence, respectively) and changes in their replacement cost and other reconciliation items between the beginning and end of the period. The supplementary table is proposed because of the

interest in statistics on the stocks of major consumer durables for purposes of studies of household welfare, expenditure behaviour and wealth and in data on major military durables for purposes of assessing the holdings of general government. A much higher priority should be assigned to compilation of the data on major consumer durables than on military durables. Not only is the need for statistics on consumer durables greater but also the difficulties of measuring replacement costs, depreciation and obsolescence and other reconciliation items are more severe for military durables.

## Use of the standard accounts and tables in compiling and presenting data

### Forms of presenting data

8.35. The data called for in the standard accounts and tables may be organized into tabulations in a number of ways. The form in which it will be desirable and convenient to compile and present the data, nationally and internationally, will depend on such circumstances as the kind of information to be furnished and emphasized and the audience to whom, and the requirements for which, the data are provided. The format of the standard tables is not intended to furnish guidelines for the presentation of the data. The main objective is to indicate the series that should be compiled.

8.36. Where, for example, the main interest is in the changes in the composition of the balance-sheets of institutional sectors or subsectors during a single accounting period, opening and closing balance-sheets for the period and the linking capital transactions and reconciliation items during the period should be presented in the same table. The table may consist of columns on these items and rows showing the institutional sectors or subsectors and their assets, liabilities and net worth. This type of presentation would be applicable for the data of standard tables 30 through 33 and standard accounts VII. Where, on the other hand, attention is to be focused on trends over a longer period in the holdings of the nation, institutional sectors and/or subsectors of certain categories of assets or liabilities and focused on trends over the period in their net lending (borrowing) or net worth, the data on each of the categories may be separated into individual tables. The balance-sheet data may be shown in the columns of the tables and the nation, the institutional sectors, and/or the subsectors and the items of the categories of holdings in question may be arrayed in the rows.

8.37. Separate tables on categories of assets such as fixed assets, non-reproducible tangible assets and financial assets may also be of interest. Trends over a number of years of all of the balance-sheets, capital-finance and reconciliation items for the nation, an institutional sector or a subsector may be dealt within the same way. The rows of the tables may be ordered to show the holdings, capital transactions and reconciliation items in respect of each kind of asset, each kind of liability to third parties, each kind of liability to second parties and net worth, in succession. Similar tables may also be wanted in order to summarize the trends of each major category of assets, liabilities to third parties and liabilities to second parties and net worth.

8.38. In matrices like in table 34, where the emphasis is on the links and the relationships between the various items of data, the aforementioned arrangements of data are usually inappropriate. In these instances, a complete section of a table

or a complete table should be devoted to presenting the data for each year. If attention is to be focused on the mix of assets and liabilities held by an institutional sector, on the relationships between these assets and liabilities and on the circumstances leading to changes in the pattern of these portfolios the format of standard accounts I in table 29 is preferable. In order to portray these factors over a number of years, the credit side of each of the accounts may be placed under the debit side of the account or the credit and debit sides may be placed side by side on facing pages.

8.39. In compiling and issuing data for general use, it may often be desirable to present simpler versions of the relevant standard tables. For this purpose, the detail in classification of assets and liabilities in the standard tables may be substantially reduced or tables may be presented on selected categories of the assets or liabilities or on net worth.

#### Periodicity of compilation

8.40. The question of the frequency with which and the dates for which balance-sheets should be compiled and issued is part of the practical problems which are discussed in the next section of this paper. In that section means are suggested whereby a complete set of annual balance-sheets may be developed. The key to this is the ability to make independent estimates of revaluations, so that they, coupled with the transactions recorded in the capital finance accounts, enable one to proceed from one balance-sheet to another.

Annex VIII.1

CODING OF ENTRIES IN THE STANDARD ACCOUNTS AND TABLES

The codes used in the standard accounts and tables for balance-sheets and reconciliation items are consistent with and supplement the codes used in standard accounts and tables for transactions in annex 8.1 of the SNA report. Financial claims are assigned the same codes as in the capital finance accounts and the system of coding is extended to codes for reconciliation items and for tangible and non-financial intangible assets. Table 8.1 shows the codes used to identify the accounts under discussion.

Table 8.1. The codes for the accounts

Accounts	Codes
Capital finance accounts	5
Balance-sheet accounts	7
Reconciliation accounts	8

Table 8.2 gives the codes for the entries in balance-sheet and reconciliation accounts and the associated capital finance accounts.

Table 8.2. The codes for class and category of entries  
in balance-sheet and reconciliation accounts  
and associated capital finance accounts

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2. Disposition of goods and services

- 2.5 Increases in stocks
- 2.6 Gross fixed capital formation
- 3.3 Consumption of fixed capital

7. Balancing items and entries on capital account n.e.c. other than financial claims

- 7.1 Saving
- 7.4 Purchases of land, net
- 7.5 Purchases of intangible assets n.e.c., net
- 7.6 Capital transfers received, net
- 7.10 Net worth and liabilities to second parties

Financial claims: 8, financial assets; 9, financial liabilities

8.0 All financial assets; 9.0 All liabilities (also used for liabilities to third parties)

8.1 Gold and IMF special drawing rights

8.2 and 9.2 Currency and transferable deposits

8.2.1 and 9.2.1 In national currency

8.2.2 and 9.2.2 In foreign currency

8.3 and 9.3 Other deposits

8.3.1 and 9.3.1 In national currency

8.3.2 and 9.3.2 In foreign currency

8.4 and 9.4 Bills and bonds, short-term

8.5 and 9.5 Bonds, long-term

8.6 and 9.6 Corporate equity securities, including capital participations

8.7 and 9.7 Short-term loans, n.e.c.

8.8 and 9.8 Long-term loans, n.e.c.

8.9 and 9.9 Net equity of households on life insurance reserves and on pension funds

8.10 and 9.10 Proprietors' net equity in quasi-corporate enterprises

8.11 and 9.11 Trade credit and advances

8.12 and 9.12 Other accounts receivable and payable

8.13 and 9.13 Other

Table 8.2 (continued)

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- 10. Reproducible tangible assets
    - 10.1 Stocks
      - 10.1.1 Goods producing industries
      - 10.1.2 Wholesale and retail trade
      - 10.1.3 Other industries
      - 10.1.4 Stocks of government services
    - 10.2 Fixed assets
      - 10.2.1 Residential buildings
      - 10.2.2 Non-residential buildings
      - 10.2.3 Other construction works
      - 10.2.4 Land improvement and plantation and orchard development
      - 10.2.5 Transport equipment
      - 10.2.6 Machinery and equipment
        - 10.2.6.1 Agricultural machinery and equipment
        - 10.2.6.2 Other machinery and equipment
      - 10.2.7 Breeding stock, draught animals, dairy cattle and the like
  - 11. Non-reproducible tangible assets
    - 11.1 Land
      - 11.1.1 Land underlying buildings and works
      - 11.1.2 Cultivated land
      - 11.1.3 Other
    - 11.2 Timber tracts and forests
    - 11.3 Subsoil assets and extraction sites
      - 11.3.1 Coal, oil and natural gas reserves and sites
      - 11.3.2 Metallic mineral reserves, mines and sites
      - 11.3.3 Other non-metallic mineral reserves, mines and sites
    - 11.4 Fisheries
    - 11.5 Historical monuments
  - 12. Non-financial intangible assets

Table 8.2 (continued)

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13. Reconciliation items

13.1 Revaluations due to price changes

- 13.1.1 Market prices
- 13.1.2 Replacement costs
- 13.1.3 Rate of discount or capitalization factor
- 13.1.4 Foreign currency exchange rates

13.2 Issue of IMF special drawing rights

13.3 Adjustments in respect of unforeseen events

- 13.3.1 Unforeseen obsolescence
- 13.3.2 Differences between allowances included in capital consumption for normal damage to fixed assets and actual losses
- 13.3.3 Transfers to net equity of households on reserves of life insurance and pension funds
- 13.3.4 Uncompensated seizure of assets

13.4 Net changes in value of tangible assets not accounted for in the capital finance accounts

13.4.1 Natural growth less depletions

- 13.4.1.1 Breeding stock, draught animals, dairy cattle and the like
- 13.4.1.2 Timber tracts and forests
- 13.4.1.3 Plantations, orchards and vineyards
- 13.4.1.4 Fisheries

13.4.2 New finds less depletions of subsoil assets

13.4.3 Losses in land and timber tracts in catastrophes and natural events

13.5 Adjustments due to changes in structure and classification

- 13.5.1 Changes in the institutional sector or subsector of owners
- 13.5.2 Acquisition or divestment of subsidiaries and consolidation or decomposition of statistical units for other reasons
- 13.5.3 Changes in the classification of entries

13.6 Termination of purchased patents, copyrights, trade marks etc.

13.7 Statistical discrepancies and discontinuities

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Annex VIII.2

THE STANDARD ACCOUNTS, AND NOTES

I accounts. Consolidated accounts for the nation

Account 7. Opening or closing balance-sheet account

7.10.1	Stocks	7.9.0	Liabilities to third parties
7.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	(except	
		7.9.6	
7.11	Land, timber tracts, subsoil assets and other non-reproducible tangible assets	and	
		7.9.10)	
7.12	Non-financial intangible assets	7.7.10	Liabilities to second parties and net worth
7.8.0	Financial assets except capital participations	7.9.6	Corporate equity securities, including capital participations
(except		7.9.10	Net equity of proprietors in quasi-corporate enterprises
7.8.6		7.7.10.1	Net worth (national wealth)
and			
7.8.10)			
7.8.6	Corporate equity securities, including capital participations		
7.8.10	Net equity of proprietors in quasi-corporate enterprises		
Opening or closing assets		Opening or closing liabilities and net worth	

a/ Gross figures should be shown in a memorandum item.

I accounts. Consolidated accounts for the nation (continued)

Account 5. Capital finance account			
5.2.5	Increase in stocks	5.9.0	Net incurrences of liabilities
5.2.6	Gross fixed capital formation	(except	to third parties
5.7.5	Purchases of non-financial	5.9.6	
	intangible assets from the	and	
	rest of the world, net	5.9.10)	
5.8.0	Net acquisition of financial	5.9.6	Net incurrence of liabilities
(except	assets except capital	and	to second parties
5.8.6	participations	5.9.10	
and		5.3.3	Consumption of fixed capital
5.8.10)		5.7.1	Saving and net capital
5.8.6	Corporate equity securities,	and	transfers from the rest of the
	including capital	5.7.6	world
	participations		
5.8.10	Proprietors' net equity in		
	quasi-corporate enterprises		
Accumulation		Finance of accumulation	

I accounts. Consolidated accounts for the nation (continued)

Account 8. Reconciliation account			
8.10.1	Stocks	8.9.0	Liabilities to third parties,
8.10.2	Fixed assets (net of accumulated consumption of fixed capital), <u>a/</u> of which:	(except of which:	
	8.13.1 Revaluations due to price changes	8.9.6 8.13.1.1	Revaluations due to market prices
		and	
		8.9.10) 8.13.1.4	Revaluations due to foreign currency exchange rates
8.11	Land, timber tracts, subsoil assets and other non-reproducible tangible assets, of which:	8.7.10	Liabilities to second parties and net worth
	8.13.1 Revaluations due to price changes	8.9.6	Corporate equity securities including capital participations
	8.13.4 Net increase in tangible assets not covered in capital finance accounts	8.9.10	Net equity of proprietors in quasi-corporate enterprises
8.8.0	Financial assets, except capital participations,	8.7.10.1	Net worth
(except	of which:		
8.8.6			
and	8.13.1.1 Revaluations due to market prices		
8.8.10)	8.13.1.4 Revaluations due to currency exchange rates		
Total		Total	

a/ Gross figures should be shown in a memorandum item.

VII accounts. Balance-sheets and reconciliation accounts

A. Non-financial enterprises, corporate and quasi-corporate

Account 7. Closing balance-sheet account

7.10.1	Stocks	7.9.0	Liabilities to third parties
7.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	(except	
		7.9.6	
		and	
7.11	Land, timber tracts, subsoil assets and other non-reproducible tangible assets	7.9.10)	
7.11.1	Land	7.9.4	Bills and bonds, short-term
7.11.2	Timber tracts	7.9.5	Bonds, long-term
7.11.3	Subsoil assets	7.9.7	Short-term loans, n.e.c.
7.11.4	Fisheries	7.9.8	Long-term loans, n.e.c.
7.12	Non-financial intangible assets	7.9.11	Trade credit and advances
7.8.0	Financial assets	7.9.12	Other liabilities and
7.8.2	Currency and transferable deposits	7.9.13	
7.8.3	Other deposits	7.7.10	Liabilities to second parties and net worth
7.8.4	Bills and bonds, short-term	7.9.6	Corporate equity securities, including capital participations
7.8.5	Bonds, long-term	7.9.10	Proprietors' net equity in quasi-corporate enterprises
7.8.6	Corporate equity securities, including capital participations	7.7.10.1	Net worth
7.8.7	Loans, n.e.c.		
and			
7.8.8			
7.8.10	Proprietors' net equity in quasi-corporate enterprises		
7.8.11	Trade credit and advances		
7.8.1,	Other financial		
7.8.12	assets		
and			
7.8.13			
Closing assets		Closing liabilities and net worth	

a/ Gross figures should be shown in a memorandum item.

VII accounts. Balance-sheets and reconciliation accounts (continued)

A. Non-financial enterprises, corporate and quasi-corporate (continued)

Account 8. Reconciliation account	
8.10.1 Stocks	8.9.0 Liabilities to third parties, (except of which:
8.10.2 Fixed assets (net of accumulated consumption of fixed capital), <u>a/</u> of which:	8.9.6 and
8.13.1 Revaluations due to price changes	8.9.10)
8.11 Land, timber tracts, subsoil assets and other non-reproducible tangible assets	8.9.5 Bonds, long-term
8.11.1 Land, of which:	8.7.10 Liabilities to second parties and net worth
8.13.1 Revaluation due to price change	8.9.6 Corporate equity securities, including capital participation
8.13.4.1.3 Natural growth less depletion, plantations, orchards and vineyards	8.9.10 Proprietors' net equity in quasi-corporate enterprises
8.11.2 Timber tracts, of which:	8.7.10.1 Net worth
8.13.1 Revaluation due to price change	
8.13.4.1.2 Natural growth less depletion	
8.11.3 Subsoil assets, of which:	
8.13.1 Revaluation due to price change	
8.13.4.2 New finds less depletion	
8.11.4 Fisheries, of which:	
8.13.1 Revaluation due to price change	
8.13.4.1.4 Natural growth less depletions	
8.8.0 Financial assets, of which:	
8.8.5 Bonds, long-term	
8.8.6 Corporate equity securities, including capital participations	
8.8.10 Proprietors' net equity in quasi-corporate enterprises	
Total	Total

a/ Gross figures should be shown in a memorandum item.

VII accounts. Balance-sheets and reconciliation accounts (continued)

B. Financial institutions

Account 7. Closing balance-sheet account

7.10.1 Stocks	7.9.0 Liabilities to third parties (except 7.9.6 and 7.9.10)
7.10.2 Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	7.9.2 Currency issued by the central bank and transferable deposits
7.11 Land, timber tracts, subsoil assets and other non-reproducible tangible assets	7.9.3 Other deposits
7.12 Non-financial intangible assets	7.9.4 Bills and bonds, short-term
7.8.0 Financial assets	7.9.5 Bonds, long-term
7.8.1 Gold and IMF special drawing rights	7.9.7 Short-term loans, n.e.c. of which by monetary institutions to:
7.8.2 Currency and transferable deposits of which by monetary institutions, liability of:	i. Resident institutions
i. Resident institutions	ii. The rest of the world
ii. The rest of the world	7.9.8 Long-term loans, n.e.c.
7.8.3 Other deposits	7.9.9 Net equity of households on reserves of life insurance and pension funds
7.8.4 Bills and bonds, short- term	7.9.11 Other liabilities
7.8.5 Bonds, long-term	7.9.12 and 7.9.13
7.8.6 Corporate equity securities, including capital participations	7.7.10 Liabilities to second parties and net worth
7.8.7 Short-term loans, n.e.c.	7.9.6 Corporate equity securities, including capital participations
i. Of which the central bank, liability of the rest of the world	7.9.10 Proprietors' net equity in quasi-corporate enterprises
7.8.8 Long-term loans, n.e.c.	7.7.10.1 Net worth
7.8.10 Proprietors' net equity in quasi-corporate enterprises	
7.8.11, Other financial assets	
7.8.12 and	
7.8.13	
Closing assets	Closing liabilities and net worth

a/ Gross figures should be shown in a memorandum item.

## VII accounts. Balance-sheets and reconciliation accounts (continued)

## B. Financial institutions (continued)

## Account 8. Reconciliation account

8.10.1	Stocks	8.9.0	Liabilities to third parties, (except of which:
8.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	8.9.6	
8.11	Land, timber tracts, subsoil assets and other non-reproducible assets, of which:	and	
8.13.1	Revaluations due to price change	8.9.10)	
8.8.0	Financial assets, of which:	8.9.5	Bonds, long-term
8.8.1	Gold and IMF special drawing rights	8.9.9	Net equity of households on reserves of life insurance and pension funds
8.8.5	Bonds, long-term	8.7.10	Liabilities to second parties and net worth
8.8.6	Corporate equity securities, including capital participations	8.9.6	Corporate equity securities
8.8.10	Proprietors' net equity in quasi-corporate enterprises	8.9.10	Proprietors' net equity in quasi-corporate enterprises
		8.7.10.1	Net worth
Total		Total	

a/ Gross figures should be shown in a memorandum item.

## VII accounts. Balance-sheets and reconciliation accounts (continued)

## C. General government

## Account 7. Closing balance-sheet account

7.10.1	Stocks	7.9.0	Liabilities
7.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	7.9.2	Currency issued by the treasury and transferable deposits
7.11	Land, timber tracts, subsoil assets and other non-reproducible tangible assets	7.9.3	Other deposits
7.11.1	Land	7.9.4	Bills and bonds, short-term
7.11.2	Timber tracts	7.9.5	Bonds, long-term
7.11.3	Subsoil assets	7.9.7	Short-term loans, n.e.c.
7.11.5	Historical monuments	7.9.8	Long-term loans, n.e.c.
7.12	Non-financial intangible assets	7.9.11, Other liabilities	
7.8.0	Financial assets	7.9.12	and
7.8.1	Gold and IMF special drawing rights	7.9.13	
7.8.2	Currency and transferable deposits of which by central government, liability of:	7.7.10.1	Net worth
	i. Resident institutions		
	ii. The rest of the world		
7.8.3	Other deposits		
7.8.4	Bills and bonds, short-term		
7.8.5	Bonds, long-term		
7.8.6	Corporate equity securities, including capital participations		
7.8.7	Short-term loans, n.e.c.		
7.8.8	Long-term loans, n.e.c.		
7.8.10	Proprietors' net equity in quasi-corporate government enterprises		
7.8.11, Other financial assets			
7.8.12			
and			
7.8.13			
Closing assets		Closing liabilities and net worth	

a/ Gross figures should be shown in a memorandum item.

## VII accounts. Balance-sheets and reconciliation accounts (continued)

## C. General government (continued)

## Account 8. Reconciliation account

8.10.1	Stocks	8.9.0	Liabilities, of which:
8.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	8.9.5	Bonds, long-term
8.11	Land, timber tracts, subsoil assets and other non-reproducible assets	8.7.10.1	Net worth
8.11.1	Land, of which:		
	8.13.1 Revaluations due to price change		
8.11.2	Timber tracts, of which:		
	8.13.1 Revaluations due to price change		
	8.13.4.1.2 Natural growth less depletions		
8.11.3	Subsoil assets, of which:		
	8.13.1 Revaluations due to price change		
	8.13.4.2 New finds less depletions		
8.11.4	Fisheries		
	8.13.1 Revaluations due to price change		
	8.13.4.1.4 Natural growth less depletions		
8.11.5	Historical monuments		
8.8.0	Financial assets, of which:		
8.8.1	Gold and IMF special drawing rights		
8.8.5	Bonds, long-term		
8.8.6	Corporate equity securities, including capital participations		
8.8.10	Net equity in quasi-corporate government enterprises		
Total		Total	

a/ Gross figures should be shown in a memorandum item.

## VII accounts. Balance-sheets and reconciliation accounts (continued)

## D. Private non-profit institutions serving households

## Account 7. Closing balance-sheet account

7.10.1	Stocks	7.9.0	Liabilities
7.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	7.9.7	Loans, n.e.c. and
7.11	Land, timber tracts, subsoil assets and other non-reproducible assets	7.9.8	
7.12	Non-financial intangible assets	7.9.11, 7.9.12	Other liabilities and
7.8.0	Financial assets	7.9.13	
7.8.1	Gold	7.7.10.1	Net worth
7.8.2	Currency and transferable deposits		
7.8.3	Other deposits		
7.8.4	Bills and bonds, short-term		
7.8.5	Bonds, long-term		
7.8.6	Corporate equity securities, including capital participations		
7.8.7,	Other financial assets		
7.8.8,			
7.8.11,			
7.8.12,			
and			
7.8.13			
Closing assets		Closing liabilities and net worth	

## Account 8. Reconciliation account

8.10.1	Stocks	8.9.0	Liabilities
8.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	8.7.10.1	Net worth
8.11	Land, timber tracts, subsoil assets and other non-reproducible tangible assets		
8.8.0	Financial assets, of which:		
8.8.5	Bonds, long-term		
8.8.6	Corporate equity securities including capital participations		
Total		Total	

a/ Gross figures should be shown in a memorandum item.

VII accounts. Balance-sheets and reconciliation accounts (continued)

E. Households, including private unincorporated non-financial enterprises

Account 7. Closing balance-sheet account

7.10.1	Stocks	7.9.0	Liabilities
7.10.2	Fixed assets (net of accumulated consumption of fixed capital) <u>a/</u>	7.9.7	Short-term loans, n.e.c.
7.11	Land, timber tracts, subsoil assets and other non-reproducible tangible assets, of which:	7.9.8	Long-term loans, n.e.c.
7.11.1	Land	7.9.11	Trade credit and advances
7.11.2	Timber tracts	7.9.12	Other liabilities and
7.11.3	Subsoil assets	7.9.13	
7.11.4	Fisheries	7.7.10.1	Net worth
7.12	Non-financial intangible assets		
7.8.0	Financial assets		
7.8.2	Currency and transferable deposits		
7.8.3	Other deposits		
7.8.4	Bills and bonds, short-term		
7.8.5	Bonds, long-term		
7.8.6	Corporate equity securities, including capital participations		
7.8.7	Loans, n.e.c.		
and			
7.8.8			
7.8.9	Net equity of households on reserves of life insurance and pension funds		
7.8.10	Proprietors' net equity in quasi-corporate enterprises		
7.8.11	Trade credit and advances		
7.8.1,	Other financial assets		
7.8.12			
and			
7.8.13			
Closing assets		Closing liabilities and net worth	

a/ Gross figures should be shown in a memorandum item.

VII accounts. Balance-sheets and reconciliation accounts (continued)

E. Households, including private unincorporated non-financial enterprises (continued)

Account 8. Reconciliation account	
8.10.1 Stocks	8.9.0 Liabilities
8.10.2 Fixed assets (net of accumulated consumption of capital assets), <u>a/</u> of which:	8.7.10.1 Net worth
8.13.1 Revaluations due to price change	
8.11 Land, timber tracts, subsoil assets and other non-reproducible tangible assets	
8.11.1 Land, of which:	
8.13.1 Revaluations due to price change	
8.13.4.1.3 Natural growth less depletion	
8.11.3 Subsoil assets, of which:	
8.13.1 Revaluations due to price change	
8.13.4.2 New finds less depletions	
8.11.4 Fisheries, of which:	
8.13.1 Revaluations due to price change	
8.13.4.1.4 Natural growth less depletion	
8.8.0 Financial assets, of which:	
8.8.5 Bonds, long-term	
8.8.6 Corporate equity securities, including capital participations	
8.8.10 Proprietors' net equity in quasi-corporate enterprises	
Total	Total

a/ Gross figures should be shown in a memorandum item.

# Notes to the standard accounts

The usefulness of presenting supplementary balance-sheets, capital finance accounts and reconciliation accounts to the I accounts for the nation on a strictly consolidated basis has been indicated in the text of chapter VIII. For this purpose the modifications set out in the table below are needed in the specified entries of the accounts. All other entries are unchanged.

## Account 7. Opening or closing balance-sheet account

7.8.0 (except 7.8.6 and 7.8.10)	Financial assets, except capital participations in respect of the rest of the world	7.9.0 (except 7.9.6 and 7.9.10)	Liabilities to third parties in the rest of the world
7.8.6	Corporate equity securities, including capital participations, of non-resident corporations	7.7.10	Liabilities to second parties in the rest of the world and net worth
7.8.10	Net equity of proprietors in non-resident quasi-corporate enterprises	7.9.6	Corporate equity securities, including capital participations of non-residents
		7.9.10	Net equity of non-resident proprietors in quasi-corporate enterprises

## Account 5. Capital finance account

5.8.0 (except 5.8.6 and 5.8.10)	Net acquisition of financial assets, except capital participations, in respect of the rest of the world	5.9.0 (except 5.9.6 and 5.9.10)	Net incurrence of liabilities to third parties and the rest of the world
5.8.6	Corporate equity securities, including capital participations, of non-resident corporations	5.7.10	Liabilities to second parties in the rest of the world
5.8.10	Net equity of resident proprietors in non-resident quasi-corporate enterprises	5.9.6	Corporate equity securities, including capital participations, of non-residents
		5.9.10	Net equity of non-resident proprietors in quasi-corporate enterprises

Notes to the standard accounts (continued)

Account 8. Reconciliation account

8.8.0	Financial assets, except capital participations, in respect of	8.9.0	Liabilities to third parties (except in the rest of the world, of
8.8.6	the rest of the world, of which:	8.9.6	which:
and		and	
8.8.10)	8.13.1.1 Revaluations due to market prices	8.9.10)	8.13.1.1 Revaluations due to market prices
	8.13.1.4 Revaluations due to foreign currency exchange rates		8.13.1.4 Revaluations due to foreign currency exchange rates
8.8.6	Corporate equity securities, including capital participations, of non-resident corporations	8.7.10	Liabilities to second parties in the rest of the world and net worth
8.8.10	Net equity of proprietors in non-resident quasi-corporate enterprises	8.9.6	Corporate equity securities, including capital participations, of non-residents
		8.9.10	Net equity of non-resident proprietors in quasi-corporate enterprises

It will also be advantageous for certain purposes to present supplementary accounts for financial institutions, general government and perhaps non-financial corporate and quasi-corporate enterprises on a consolidated basis. As in the case of the accounts for the nation as a whole the differences between consolidation and combination are in the entries on financial assets and liabilities.

The detail in classification of entries that is proposed in the standard accounts has been kept to the minimum that is considered to be necessary for each institutional sector and the national as a whole. It therefore varies from one institutional sector to another and is less detailed for the nation as a whole than for some of the institutional sectors. Countries may consider it desirable to present more detailed classifications than are proposed, for example, for fixed assets in all of the accounts and, in addition, for non-reproducible tangible assets and financial assets and liabilities in the accounts for the nation. They may also find it advantageous to subdivide a number of the entries on financial assets, liabilities to third parties and liabilities to second parties into those relating to resident sectors and the rest of the world, especially for non-financial corporate and quasi-corporate enterprises, financial institutions and general government.

It will be useful to supply memoranda to the appropriate standard accounts on the items listed below:

Notes to the standard accounts (continued)

(a) Long-term bonds. The nominal (face) value of the bonds, as assets and as liabilities, which are to be valued at market values in the accounts proper. If the payments on redemption of the long-term bonds differ from their nominal value, it would be preferable to enter the redemption values.

(b) Corporate equity securities including capital participations. The paid-in value of the securities of a corporation, revalued in terms of the value of its fixed assets, as assets and as liabilities to second parties. These securities are to be valued at market values in the accounts proper.

(c) Leases, concessions and the like. In the balance-sheets, the leases of structures or land are to be divided between the leasers and the owners. The same procedure is recommended for concessions or leases of timber tracts, subsoil assets or fisheries. In the capital finance accounts the value of purchases (sales) of leases and concessions is to be included in net purchases of non-financial intangible assets. It will therefore be useful to give memoranda on the value of leases or concessions included in the stocks of fixed assets, land, timber tracts and subsoil assets of the holders of the leases or concessions and excluded from these stocks of the owners of the structures, land, timber tracts etc. The shift of leases or concessions purchased (sold) from net purchases of non-financial intangible assets in the capital finance account to the category of non-reproducible tangible assets involved in the balance-sheet accounts will require reconciliation entries for both these types of assets. These reconciliation items should be classed as "adjustments due to changes in structure and classification".

## STANDARD AND SUPPLEMENTARY TABLES, AND NOTES

Table 29. Opening and closing stocks, net accumulation and reconciliation of assets and liabilities for the nation

Type of asset and liability		Opening stock	Capital transactions during the year a/	Revaluations due to price changes b/	Net increases not included in capital transactions c/	Other	Closing stock
Code	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(a) Tangible and non-financial intangible assets							
10.1	Stocks						
10.1.1	Goods producing industries						
10.1.2	Wholesale and retail trade						
10.1.3	Other industries						
10.1.4	Stocks of government services						
10.2	Fixed assets (net of consumption of fixed capital) d/						
10.2.1	Residential buildings						
10.2.2	Non-residential buildings						
10.2.3	Other construction works						
10.2.4	Land improvement and plantation and orchard development						
10.2.5	Transport equipment						
10.2.6.1	Agricultural machinery and equipment						
10.2.6.2	Other machinery and equipment						
10.2.7	Breeding stock, draught animals, dairy cattle and the like						
11	Non-reproducible tangible assets						
11.1	Land, of which:						
11.1.1	Land underlying buildings and works						
11.1.2	Cultivated land						
11.2	Timber tracts						
11.3	Subsoil assets						
11.3.1	Coal, oil and natural gas reserves						
11.3.2	Metallic mineral reserves						
11.3.3	Other non-metallic mineral reserves						
11.4	Fisheries						
11.5	Historical monuments						
12	Non-financial intangible assets						
	Total tangible and non-financial intangible assets						
(b) Financial assets							
8.1	Gold and DGF special drawing rights						
8.2	Currency and transferable deposits in:						
	1. Resident sectors						
	ii. The rest of the world						
8.3	Other deposits						
8.4	Bills and bonds, short-term						
8.5	Bonds, long-term						
8.6	Corporate equity securities, including capital participations						
8.7	Short-term loans, n.e.c.						
8.8	Long-term loans, n.e.c.						
8.9	Net equity of households on reserves of life insurance and pension funds						
8.10	Resident proprietors' net equity in non-resident quasi-corporate enterprises e/						
8.11	Trade credit and advances						
8.12	Other accounts receivable						
8.13	Other financial assets						
8.0	Total financial assets						
(c) Total assets							
	Tangible non-financial intangible and financial assets						
(d) Liabilities and net worth							
9.2	Currency and transferable deposits of:						
	1. Resident sectors						
	ii. The rest of the world						
9.3	Other deposits						
9.4	Bills and bonds, short-term						
9.5	Bonds, long-term						
9.7	Short-term loans, n.e.c.						
9.8	Long-term loans, n.e.c.						
9.9	Net equity of households on reserves of life insurance and pension funds						
9.11	Trade credit and advances						
9.12	Other accounts payable						
9.13	Other liabilities						
9.0 (except 9.6 and 9.10)	Total liabilities to third parties						
9.6	Corporate equity securities, including capital participations						
9.10	Non-resident proprietors' net equity in resident quasi-corporate enterprises e/						
7.10.1	Net worth						
7.10	Total liabilities to second parties and net worth						

a/ Capital transactions cover relevant entries on the capital finance account, i.e., gross fixed capital formation less consumption of fixed capital, increase in stocks, improvements to land, development and extension of plantations, orchards and vineyards, development and extension of timber tracts and fisheries, construction in respect of exploitation of subsoil deposits, net purchases of non-financial tangible assets and transactions in financial assets and liabilities.

b/ Not applicable for non-financial intangible assets.

c/ Applicable only for breeding stock, dairy cattle, draught animals and the like and for most non-reproducible tangible assets.

d/ Gross figures for fixed assets and their components should be shown in a memorandum item.

e/ The transactions between resident quasi-corporate enterprises and resident proprietors are eliminated as a result of consolidation.

Table 30. Closing stocks and reconciliation for assets and liabilities of private and public institutions

Type of asset and liability		Private institutions				Public institutions			
		Closing stocks	Reconciliation items			Closing stocks	Reconciliation items		
			Revaluations due to price changes a/	Net increases not included in capital transactions b/	Other		Revaluations due to price changes a/	Net increases not included in capital transactions b/	Other
Code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(a) Tangible and non-financial intangible assets									
10.1	Stocks								
10.2	Fixed assets (net of consumption of fixed capital) c/								
11	Non-reproducible tangible assets								
11.1	Land								
11.2	Timber tracts								
11.3	Subsoil assets								
11.4	Fisheries								
11.5	Historical monuments								
12	Non-financial intangible assets								
	Total								
(b) Financial assets									
8.1	Gold and IMF special drawing rights								
8.2	Currency and transferable deposits								
8.3	Other deposits								
8.4	Bills and bonds, short-term								
8.5	Bonds, long-term								
8.6	Corporate equity securities, including capital participations								
8.7	Short-term loans, n.e.c.								
8.8	Long-term loans, n.e.c.								
8.9	Net equity of households on reserves of life insurance and pension funds								
8.10	Proprietors' net equity in non-resident quasi-corporate enterprises d/								
8.11	Trade credit and advances								
8.12 and 8.13	Other financial assets								
8.0	Total financial assets								
(c) Total assets									
	Tangible, non-financial intangible and financial assets								
(d) Liabilities and net worth									
9.2	Currency and transferable deposits								
9.3	Other deposits								
9.4	Bills and bonds, short-term								
9.5	Bonds, long-term								
9.7	Short-term loans, n.e.c.								
9.8	Long-term loans, n.e.c.								
9.9	Net equity of households on reserves of life insurance and pension funds								
9.11	Trade credits and advances								
9.12 and 9.13	Other liabilities to third parties								
9.0 (except 9.6 and 9.10)	Total liabilities to third parties								
9.6	Corporate equity securities including capital participations								
9.10	Non-resident proprietors' net equity in resident quasi-corporate enterprises d/								
7.10.1	Net worth								
7.10	Total liabilities to second parties and net worth								

a/ Not applicable for non-financial intangible assets.

b/ Applicable only for breeding stock, dairy cattle, draught animals and the like and for most non-reproducible tangible assets.

c/ Gross figures for fixed assets should be shown in a memorandum item.

d/ The transactions between resident quasi-corporate enterprises and resident proprietors are eliminated as a result of consolidation.

Table 31. Closing stocks and reconciliation for assets and liabilities of non-financial corporate and quasi-corporate enterprises, by kind of economic activity

Type of asset and liability		Categories of kind of economic activity according to ISIC major division except for manufacturing, where ISIC divisions are used			
		Closing stocks	Reconciliation		
			Revaluations due to price changes a/	Net increases not included in capital transactions b/	Other
Code					
	(a) Tangible and non-financial intangible assets				
10.1	Stocks				
10.2	Fixed assets (net of consumption of fixed capital) c/				
11	Non-reproducible tangible assets, of which:				
11.1	Land, of which:				
11.1.1	Land underlying buildings and works				
11.1.2	Cultivated land				
11.2	Timber tracts				
11.3	Subsoil deposits				
11.4	Fisheries				
12	Non-financial intangible assets				
	Total				
	(b) Financial assets				
8.1	Gold				
8.2	Currency and transferable deposits				
8.3	Other deposits				
8.4	Bills and bonds, short-term				
8.5	Bonds, long-term				
8.6	Corporate equity securities, including capital participations				
8.7 and 8.8	Loans, n.e.c.				
8.10	Proprietors' net equity in non-resident quasi-corporate enterprises d/				
8.11	Trade credit and advances				
8.12 and 8.13	Other financial assets				
8.0	Total financial assets				
	(c) Total assets				
	Tangible, non-financial intangible and financial assets				
	(d) Liabilities and net worth				
9.4	Bills and bonds, short-term				
9.5	Bonds, long-term				
9.7	Short-term loans, n.e.c.				
9.8	Long-term loans, n.e.c.				
9.11	Trade credit and advances				
9.2 and 9.13	Other liabilities				
9.0 (except 9.6)	Total liabilities to third parties				
9.6	Corporate equity securities, including capital participations				
9.10	Proprietors' net equity in quasi-corporate enterprises				
7.10.1	Net worth				
7.10	Liabilities to second parties and net worth				

a/ Not applicable for non-financial intangible assets.

b/ Applicable only for breeding stock, dairy cattle, draught animals and the like and for most non-reproducible tangible assets.

c/ Gross figures for fixed assets should be shown in a memorandum item.

d/ Proprietors' net equity only in non-resident quasi-corporate enterprises since resident quasi-corporate enterprises should be part of the same statistical unit as the parent corporation.

Table 32. Closing stocks and reconciliation for assets and liabilities of the subsectors of general government

Type of asset and liability		Central government				State and local government			Social security funds		
		Closing stocks	Reconciliation			Closing stocks	Reconciliation		Closing stocks	Reconciliation	
			Revaluations due to price changes a/	Net increases not included in capital transactions b/	Other		Revaluations due to price changes a/	Other		Revaluations due to price changes a/	Other
Code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(a) Tangible and non-financial intangible assets											
10.1	Stocks										
10.2	Fixed assets (net of consumption of fixed capital) c/										
11	Non-reproducible tangible assets										
11.1	Land										
11.2	Timber tracts d/										
11.3	Subsoil deposits d/										
11.4	Fisheries d/										
11.5	Historical monuments e/										
12	Non-financial intangible assets										
	Total										
(b) Financial assets											
8.1	Gold and IMF special drawing rights d/										
8.2	Currency and transferable deposits										
8.3	Other deposits										
8.4	Bills and bonds, short-term										
8.5	Bonds, long-term										
8.6	Corporate equity securities, including capital participations e/										
8.7 and 8.8	Loans, n.e.c.										
8.10	Proprietors' net equity in quasi-corporate government enterprises										
8.11-8.13	Other financial assets										
8.0	Total										
(c) Total assets											
	Tangible, non-financial intangible and financial assets										
(d) Liabilities and net worth											
9.2	Currency issued by Treasury and transferable deposits d/										
9.3	Other deposits e/										
9.4	Bills and bonds, short-term e/										
9.5	Bonds, long-term e/										
9.7	Short-term loans, n.e.c.										
9.8	Long-term loans, n.e.c.										
9.11-9.13	Other liabilities										
9.0	Total liabilities										
7.10.1	Net worth										

a/ Not applicable for non-financial intangible assets.

b/ Applicable only for breeding stock, dairy cattle, draught animals and the like and for most non-reproducible tangible assets.

c/ Gross figures for fixed assets should be shown in a memorandum item.

d/ These entries are likely to be relevant only for the central government.

e/ These entries are unlikely to be relevant for social security funds.

Table 33. Closing stocks and revaluation for assets and liabilities of the subsectors of households, including private non-financial unincorporated enterprises

Type of asset and liability		Households including proprietors of agricultural unincorporated enterprises				Households including proprietors' of non-agricultural unincorporated enterprises except owners of owner-occupied dwellings only				Other households		
		Reconciliation				Reconciliation				Reconciliation		
		Closing stocks	Revaluations due to price changes a/	Net increases not included in capital transactions b/	Other	Closing stocks	Revaluations due to price changes a/	Net increases not included in capital transactions b/	Other	Closing stocks	Revaluations due to price changes a/	Other
Code	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(a) Tangible and non-financial intangible assets												
10.1	Stocks c/											
10.2	Fixed assets (net of accumulated consumption of fixed capital) d/											
11	Non-reproducible tangible assets, of which:											
11.1	Land, of which:											
11.1.1	Land underlying buildings and works											
11.1.2	Cultivated land											
11.2	Timber tracts											
11.3	Subsoil assets											
11.4	Fisheries e/											
12	Non-financial tangible assets											
	Total											
(b) Financial assets												
8.1	Gold											
8.2	Currency and transferable deposits											
8.3	Other deposits											
8.4	Bills and bonds, short-term											
8.5	Bonds, long-term											
8.6	Corporate equity securities, including capital participations											
8.7 and 8.8	Loans, n.e.c.											
8.9	Net equity of households on reserves of life insurance and pension funds											
8.10	Proprietors' net equity in quasi-corporate enterprises											
8.11-8.13	Other financial assets											
8.0	Total											
(c) Total assets												
	Tangible, non-financial intangible and financial assets											
(d) Liabilities and net worth												
9.7	Short-term loans, n.e.c.											
9.8	Long-term loans, n.e.c.											
9.11	Trade credit and advances											
9.12 and 9.13	Other liabilities											
9.0	Total liabilities											
7.10.1	Net worth											

a/ Not applicable for non-financial intangible assets.

b/ Applicable only for breeding stock, dairy cattle, draught animals and the like and for most non-reproducible tangible assets.

c/ Assets in the form of stocks are inapplicable for other households; holdings of fisheries are likely to occur for households including proprietors of agricultural unincorporated enterprises only.

d/ Gross figures for fixed assets should be shown in a memorandum item.

Table 34. Stocks of financial assets analysed by the subsectors of which they are assets and liabilities

Financial assets of:											Total	Type of claim and debtor and creditor a/	Liabilities of:
The rest of the world	Households	Private non-profit institutions	General government			Financial institutions				Non-financial corporate and quasi-corporate enterprises			Same columns as for financial assets
(12)	(11)	(10)	Social security funds (9)	State and local government (8)	Central government (7)	Other financial institutions (6)	Insurance companies and pension funds (5)	Other monetary institutions (4)	Central bank (3)	(2)	(1)	Item	Item
(a) All national and foreign financial assets and liabilities													
												8.1	Gold and IMF special drawing rights 9.1
												8.2	Currency and transferable deposits 9.2
												1.	In national currency
												a.	Resident sectors
												b.	The rest of the world
												ii.	In foreign currency
												a.	Resident sectors
												b.	The rest of the world
												8.3	Other deposits 9.3
												1.	In national currency
												a.	Resident sectors
												b.	The rest of the world
												ii.	In foreign currency
												a.	Resident sectors
												b.	The rest of the world
												8.4	Bills and bonds, short-term 9.4
												i.	Non-financial corporations
												ii.	Financial institutions
												iii.	Central government
												iv.	State and local government
												v.	The rest of the world
												8.5	Bonds, long-term 9.5
												i.	Non-financial corporations
												ii.	Financial institutions
												iii.	Central government
												iv.	State and local government
												v.	The rest of the world
												8.6	Corporate equity securities, including capital participations 9.6
												i.	Resident corporations
												a.	Quoted
												b.	Not quoted
												ii.	The rest of the world
												a.	In subsidiaries
												b.	Other
												8.7	Short-term loans, n.e.c. 9.7
												i.	Non-financial corporate and quasi-corporate enterprises
												ii.	Monetary institutions
												iii.	Other financial institutions
												iv.	Central government
												v.	State and local government
												vi.	Other resident sectors
												vii.	The rest of the world
												8.8	Long-term loans, n.e.c. 9.8
												i.	Non-financial corporate and quasi-corporate enterprises
												ii.	Financial institutions
												iii.	Central government
												iv.	State and local government
												v.	Other resident sectors
												vi.	The rest of the world
												8.9	Net equity of households on reserves of life insurance and pension funds 9.9
												8.10	Proprietors' net equity in quasi-corporate enterprises 9.10
												i.	Resident enterprises
												ii.	Non-resident enterprises
												8.11	Trade credit and advances 9.11
												i.	Non-financial corporate and quasi-corporate enterprises
												ii.	Central government
												iii.	State and local government
												iv.	Households
												v.	Other resident sectors
												vi.	The rest of the world
												8.12	Other accounts receivable and payable 9.12
												i.	Resident sectors
												ii.	The rest of the world
												8.13	Other 9.13

Table 34. Stocks of financial assets analysed by the subsectors of which they are assets and liabilities (continued)

Financial assets of:											Total	Type of claim and debtor and creditor <u>a/</u>	Liabilities of:	
The rest of the world	House-holds	Private non-profit institu-tions	General government			Financial institutions			Non-financial corporate and quasi-corporate enterprises	Same columns as for financial assets				
			Social security funds	State and local government	Central government	Other financial institu-tions	Insurance companies and pension funds	Other monetary institu-tions					Central bank	
(12)	(11)	(10)	(9)	(8)	(7)	(6)	(5)	(4)	(3)	(2)	(1)	Item	Item	
(b) Foreign and financial assets and liabilities b/														
											8.1	Gold and IMF special drawing rights	9.1	
											8.2-	Currency, deposits and short-term bills and bonds	9.2-	
											8.4		9.4	
												1. International reserves or offsets		
												ii. Other claims		
											8.5-	Other financial assets or liabilities	9.5-	
											8.13		9.13	
												1. International reserves or offsets		
												ii. Other claims		

a/ The subdivision of the categories of claims according to sector of debtor relates to transactions in respect of all types of financial assets. The subdivision of the categories of claims according to sector of creditor relates to transactions in currency and transferable deposits, other deposits and short-term and long-term loans, n.e.c. only.

b/ The definition of international reserves and offsets to those reserves are those of the International Monetary Fund and the collection internationally of these data is the responsibility of the Fund.

Table 35. Balance-sheet of foreign financial assets  
and liabilities

Financial assets	Item	Type of claim	Item	Liabilities
<b>(a) All foreign financial assets or liabilities <u>a/</u></b>				
	8.1	Gold and IMF special drawing rights		
	8.2	Currency and transferable deposits	9.2	
	8.3	Other deposits	9.3	
	8.4	Bills and bonds, short-term	9.4	
	8.5	Bonds, long-term	9.5	
	8.6	Corporate equity securities, including capital participations	9.6	
		i. In subsidiaries		
		ii. Other		
	8.7	Short-term loans, n.e.c.	9.7	
	8.8	Long-term loans, n.e.c.	9.8	
	8.9	Net equity of households on reserves of life insurance and pension funds	9.9	
	8.10	Proprietors' net equity in quasi-corporate enterprises	9.10	
	8.11	Trade credit and advances	9.11	
	8.12-	Other claims	9.12-	
	8.13		9.13	
	Total foreign financial assets or liabilities			
<b>(b) International reserves or offsets <u>b/</u></b>				
	8.1	Gold and IMF special drawing rights		
	8.2-	Currency, deposits and short-term bills and	9.2-	
	8.4	bonds	9.4	
	8.5-	Other financial assets or liabilities	9.5-	
	8.13		9.13	
		a. Short-term		
		b. Long-term		
	Total			

**a/** The amount of foreign currency premium received should be shown in a footnote to this table.

**b/** The definitions of international reserves and offsets to these reserves are those of the International Monetary Fund and the collection internationally of these data is the responsibility of the Fund.

Table 36. Supplementary table: Opening and closing stock, final consumption expenditure and reconciliation for major consumer and military durables

Kind of goods		Opening stocks	Final consumption expenditure	Reconciliation			Closing stocks
				Depreciation and obsolescence	Revaluations due to price changes	Other	
Code	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	(a) Consumer durables						
	4.1.1	Furniture, fixtures, carpets and other floor coverings					
	4.3.1	Heating and cooking appliances, refrigerators, washing machines and similar major appliances, including fittings					
	6.1	Motor-cars, trailers and caravans; motor cycles and bicycles					
	7.1.1	Wireless and television sets and gramophones					
	7.1.2	Photographic equipment, musical instruments, boats, and other major recreational durables					
	(b) Military durables						
	Military durables						

### Notes to the standard tables

The detail in classification of entries that is proposed in the standard tables varies from one institutional sector to another. Countries may consider it desirable to present more detailed classifications than are proposed for such items as fixed assets and financial assets and liabilities. They may find it advantageous to present the full classification of fixed assets proposed in table 5.1 in the standard tables for corporate and quasi-corporate non-financial enterprises and for households. Moreover, it may be considered desirable and feasible to subdivide selected financial claims by resident and non-resident debtors or creditors, respectively, in the standard tables for the nation as a whole and for each of the institutional sectors.

As in the standard accounts, it will be useful to supply memoranda to the appropriate standard tables on the items listed below:

- (a) Long-term bonds. The nominal (face) value of the bonds, as assets and as liabilities, which are to be valued at market values in the accounts proper. If the payments on redemption of the long-term bonds differ from their nominal value, it would be preferable to enter the redemption values.
- (b) Corporate equity securities including capital participations. The paid-in value of the securities of a corporation, revalued in terms of the value of its fixed assets, as assets and as liabilities to second parties. These securities are to be valued at market values in the accounts proper.
- (c) Leases, concessions and the like. In the balance-sheets, the leases of structures or land are to be divided between the lessors and the owners. The same procedure is recommended for concessions or leases of timber tracts, subsoil assets or fisheries. In the capital finance accounts the value of purchases (sales) of leases and concessions is to be included in net purchases of non-financial intangible assets. It will therefore be useful to give memoranda on the value of leases or concessions included in the stocks of fixed assets, land, timber tracts and subsoil assets of the holders of the leases or concessions and excluded from these stocks of the owners of the structures, land, timber tracts etc. The shift of leases or concessions purchased (sold) from the category of net purchases of non-financial intangible assets in the capital finance account to the category of non-reproducible tangible assets in the balance-sheet accounts will require reconciliation entries for both these types of assets. The reconciliation items should be classed as "adjustments due to changes in structure and classification".

## Chapter IX

### SOURCES, METHODS AND PRIORITIES OF BALANCE-SHEET DATA

9.1. This chapter is concerned with the sources and methods of gathering and compiling data on balance-sheets and their reconciliation and the order in which these data may be developed for various institutional sectors. The discussion of these topics is, of necessity, rather general in character. This is so because of the very limited national experience in gathering and compiling balance-sheet data and the major differences that exist between countries in the sources and kind of available information. It is hoped that, none the less, the discussion of the difficulties that may be encountered in compiling and reconciling balance-sheets and the sources and methods of carrying out this work will be of interest and assistance to countries. The suggestions as to the broad orders of priority in which balance-sheet statistics may be evolved is of course also intended to serve the same purpose.

#### The approaches to compiling balance-sheet and reconciliation data

9.2. Two main approaches have been used in compiling balance-sheets: direct compilation and the indirect approach.

9.3. In the direct approach, data on balance-sheets and on their reconciliation are primarily based on data gathered on the assets and liabilities of enterprises, government bodies and perhaps households as of specific dates. Supplementary series of data on items such as prices, discoveries of subsoil deposits, natural growth of timber tracts, changes in the structure of statistical units, will usually be needed in order to adjust and reconcile these data. Balance-sheet information may be available from the administrative activities of government bodies and from stock exchanges, from the public issue of these statements and from special statistical inquiries. Adequate balance-sheet data may not be available frequently, completely or rapidly enough for purposes of compiling annual accounts and supporting tables. Indirect methods will therefore often have to be used in compiling the balance-sheet accounts and tables on an annual basis.

9.4. The indirect methods of compiling data on balance-sheet and reconciliation accounts usually consist of extrapolating, period by period, estimates for a bench-mark date that are made by means of the direct approach outlined above. The bench-mark date is often the beginning of a calendar year and the periods are generally calendar years or quarters. The indirect methods may of course also be used to interpolate, period by period, between bench-mark dates. The data for purposes of extrapolation or interpolation are figures on such matters as the transactions carried out and the changes in prices from the national accounts and similar sources, the discovery of new subsoil deposits, the natural growth in timber tracts and the structural changes in statistical units during the periods in question. Many of these series of data are likely to be available from periodic statistical inquiries primarily needed for purposes other than the compilation of balance-sheet and reconciliation accounts and tables, for example,

for estimating the transactions of the national accounts; some of these series of data will probably involve the collection of special information. As in the direct method, the series of data for use in the indirect approach may be gathered from such sources as records resulting from the administration of government laws and regulations, stock exchanges and other financial institutions, the financial statements issued by enterprises and special statistical returns.

### The direct approach

#### Balance-sheets from administrative and related sources

9.5. Enterprises may be required to file balance-sheets annually or less frequently in connexion with income tax laws, company and similar acts, or other forms of government regulation or registration. Examples of the latter are the regulation of businesses, such as banks, insurance companies and public utilities, the periodic reporting of companies, the securities of which are traded on public exchanges or the size of which exceeds a given level, and the registration of new and secondary public offerings of securities. In a number of countries, the balance-sheets of large and publicly owned - if not of all - incorporated enterprises but often not those of unincorporated units are available from one or more of those administrative sources. In some countries, all enterprises, irrespective of legal form or size, are required to file balance-sheets to government tax or registration authorities. Private non-profit institutions serving households may also be required to furnish balance-sheets in connexion with their exemption from income taxes, regulation by government or accountability to their boards of directors and major contributors. While government bodies often do not prepare balance-sheets as part of their financial accounting, it should be feasible to compile these data from government property and debt records and accounts. In most instances, periodic balance-sheets or accounting records from which these statements may be compiled are not available for households and many of their small and medium-sized unregulated unincorporated enterprises. However, statements filed in connexion with probate taxes on estates may furnish an irregular source of balance-sheet data for households.

9.6. So that the balance-sheets available from government and private administrative activities may be effective and reliable sources of data for compiling balance-sheet accounts and tables, the required returns should be standardized, taking due account of statistical needs, and properly checked. All too often, because these prerequisites are not met the balance-sheets filed in connexion with government or private administrative activities are of little value in compiling balance-sheet data. Moreover, the dates to which the balance-sheets relate may differ and the units to which they relate may not conform to those wanted for statistical purposes. Furthermore, the categories of assets and liabilities used may vary from one respondent to another and be too broad in scope; the methods of valuing certain assets and liabilities, depreciation and bad debts and of defining reserves and the basis for recording certain items may also differ from one respondent to another. Lack of policing and checking of returns will probably result in too much non-response and in the collection of incomplete and erroneous returns, in particular, for the smaller enterprises.

## Sources and methods of supplementing balance-sheets

### Requirements

9.7. Even with the standardization, follow-up, editing etc. of the balance-sheets to be filed in connexion with the administration of laws, regulations or registrations, it is often not feasible to eliminate some of the deficiencies mentioned above. It will, on the whole, be impracticable to require that enterprises file balance-sheets that differ significantly from the practices which are acceptable and prevalent in business accounting and which they find useful in managing their business. Thus it may not be feasible to require enterprises to compile balance-sheets as of given dates or to value tangible assets and long-term bonds and shares at market prices or the equivalent. Problems also arise in making statistical use of consolidated balance-sheets compiled for families of parent and subsidiary enterprises, some of which may be abroad or fall into different institutional sectors.

### Adjustments of statistical units

9.8. Where the balance-sheets that are available from administrative sources cover families of legal units that need to be subdivided into new units for statistical purposes, it will generally be necessary to obtain special supplementary balance-sheets for the subsidiaries that are to be separated from the family - those abroad or those that are included in a different institutional sector from the parent unit. The supplementary balance-sheets should divide the equity securities and other liabilities issued by the subsidiaries in question into those held by the parent company and by other subsidiary units of the family and those held by others. Any financial assets which are liabilities of the parent company and other subsidiary units of the family should also be segregated. This information is required to deconsolidate and divide up the balance-sheets of the families into the desired statistical units and to value the parent's holdings of equity securities of the subsidiaries in question in terms of the subsidiaries' net worth.

### Adjustment of dates

9.9. In principle, in order to compile balance-sheet accounts and tables as of a common date, special balance-sheets need to be obtained for enterprises whose balance-sheet dates differ from the common date. If the number of such enterprises is great, the special balance-sheets may be gathered from a stratified sample of the units in question, with probabilities proportional to the magnitude of their assets. The burden and costs of compiling data for a common date may be reduced by gathering the special balance-sheets from the sample at infrequent intervals only and using the ratios of various assets and liabilities in the off-date balance-sheets to those in the latest corresponding special balance-sheets in order to adjust the items of off-date balance-sheets for later dates. It may even be sufficient to gather the special data and to compute the ratios for holdings of selected assets and liabilities that are expected to vary substantially during the course of a year.

### Adjustment in valuation

9.10. Problems of adjusting or replacing the values entered in the balance-sheets of enterprises and the accounts and records of government bodies arise for such

items as stocks, fixed assets, non-reproducible tangible assets, long-term bonds and equity securities. Stocks may, for example, be valued in some balance-sheets on a first-in, first-out basis and in other balance-sheets on a last-in, first-out market price basis. Valuation of stocks in terms of last-in, first-out market prices, but not by other approaches, is suitable for use in balance-sheet accounts. Fixed assets, land and subsoil deposits are often valued at costs of acquisition, reduced by depreciation of fixed assets and depletion of subsoil deposits. Timber tracts are valued in a number of differing ways in business accounting; long-term bonds and equity securities are often valued at cost of acquisition as assets and at nominal (face) value as liabilities. Equity securities as liabilities are entered at paid-in values in a number of instances.

### Stocks

9.11. To compile suitable figures of stocks for the balance-sheet accounts, it will be necessary to gather supplementary information on the methods of valuation used in the balance-sheets of enterprises and to make estimates of the market value of the stocks at the balance-sheet date when the last-in, first-out market price basis is not used. These estimates may be based on data compiled on the physical levels of the stocks at the beginning and end of a period, that is, the opening and closing balance-sheet dates, to measure the physical change in stocks during the period for purposes of the capital finance accounts. Current market prices at the beginning and at the ending balance-sheet dates should be used in valuing the physical levels of the stocks at these respective dates.

### Fixed assets

9.12. For purposes of suitable bench-mark estimates of fixed assets and of depreciation for the balance-sheet accounts, a special census inventory or sample survey of the assets may be undertaken or the estimates may be built up from data on gross fixed capital formation and the expected lifetimes of use of fixed assets through the perpetual inventory approach. The perpetual inventory approach is based on data needed for the transaction accounts of the national accounts, is much less burdensome than a census or sample inventory of fixed assets and furnishes a means of preparing annual estimates of the stocks of fixed assets. It is therefore much more commonly used in practice than are infrequent census or sample inventories of the stock of fixed assets in making bench-mark estimates of these stocks. On the other hand, a bench-mark inventory of stocks of fixed assets furnishes a sound foundation for subsequent estimates without the long delay of building it up through the perpetual inventory method. The perpetual inventory method is described in paragraphs 6.10. and 6.11. above and illustrated in table 9.2. below. Bench-mark inventories of fixed assets are briefly described here.

9.13. Multistage stratified samples of enterprises and their establishments and of government units, coupled with as detailed indexes of prices as possible, going back to the earliest time of acquisition of the fixed assets, furnish an inventory of the age, cost of acquisition and condition of the various kinds of fixed assets. The series on the age, cost of acquisition and price indexes supply the means of estimating the replacement cost of the fixed assets of the sample units, and the data on age and condition of the fixed assets, together with the estimates of replacement costs, may be used to estimate their accumulated straight-line depreciation. The ratios of these estimates for the sampled units

to their balance-sheet entries on the gross value and accumulated depreciation of fixed assets, when applied to the balance-sheet entries for all enterprises or government units, would yield the desired figures for the balance-sheet accounts. Enterprises and government units should be stratified according to size and broad activity groups in order to select the sample for the inquiry and to make the ratio estimates.

9.14. Because the inquiries outlined above can be costly and burdensome, data gathered on the fire insurance values of fixed assets are sometimes used instead in order to make bench-mark estimates of the replacement cost of stocks of fixed assets. However, this approach may not be entirely satisfactory. Large organizations, for example, public enterprises or government bodies, often do not carry fire insurance. Furthermore, some fire insurance policies may yield figures of gross value at replacement cost for the fixed assets of insured units while other policies may furnish information on gross and written-down values at replacement cost. In the former case, information will not be available for estimating accumulated depreciation.

#### Non-reproducible tangible assets

9.15. Estimates of the market value of land may be derived by gathering figures of assessed values and adjusting them to market values or by inquiring into the costs and time of acquisition of and improvements to various kinds of land, coupled with price index numbers of their market prices. In order to estimate the balance-sheet values of subsoil assets and timber tracts, it will probably be necessary to gather information for at least a sample of them on their size, character, expected years of exploitation and net return during the year preceding the balance-sheet date in order to adjust the business accounting values to capitalized values in terms of the current market situation. The government mining and forestry authorities may be of assistance in making these estimates. An alternative that may be used in some countries is to adjust figures gathered on assessed values for property taxes to market values.

#### Long-term bonds and equity securities

9.16. In order to estimate the market values of the assets of enterprises and other institutional units in long-term bonds and equity securities, it will be necessary to make an inventory of these holdings for at least a sample of the institutions. The inventory may consist of figures abstracted from the registers discussed below on the quantities of various long-term bonds and equity securities held by various kinds of institutions or of data on the quantity, market price and cost of acquisition of these financial assets from a stratified sample of enterprises. The latter series of data may be used to adjust the business accounting values of assets in long-term bonds and equity securities to market values; the former figures, coupled with market prices, may be used for the same purpose or to compile the desired data on all institutional units directly.

#### Registers from administrative sources

9.17. Registers of creditors or debtors which are useful in compiling bench-mark and more frequent balance-sheet data are often maintained for purposes of

administrative activities in the case of such financial claims as bank and other deposits, bonds, equity securities, loans, and accounts receivable and payable. Banks and similar financial institutions have registers on bank and other deposits, bonds and loans; corporations, government bodies or registrar agencies maintain registers on outstanding bonds and equity securities; enterprises could be the source of records on accounts receivable and payable. Registers of government authorities on the assessed value of land and certain other non-reproducible tangible assets are useful for purposes of valuing these assets. The registers can furnish the basic data on amounts or quantities for estimating the appropriate value of the assets and liabilities under discussion for each institutional sector and subsector, including households and the rest of the world. The statistical authority would of course need to classify the units listed in the registers according to institutional sectors and subsectors. An important drawback of registers is that for claims, such as equity securities, bonds and even deposits, registration is often permitted in the name of nominees or trustees. In these circumstances it will be necessary to gather information from units that are thought to be important nominees or trustees in order to ascertain the identity of the owners. If the use of complete registers is costly and burdensome, two-stage, stratified sampling - first, registers; secondly, entries in the sample registers - may be employed. The use of electronic computers would facilitate the work.

#### Reconciliation of successive balance-sheet estimates from administrative sources

##### Requirements for data

9.18. When balance-sheets that are available from administrative activities are the primary source of estimates of the desired accounts and tables for successive dates, it is, in general, necessary to resort to other sources of information for purposes of reconciling the estimates for a number of items. This is so because the differences between the balance-sheet estimates for successive dates may be due to multiple circumstances - for example, transactions, changes in market prices, natural growth less depletions, and changes in the structure of some statistical units in the case of timber tracts or plantations, orchards and vineyards; transactions, and changes in market price and structure of some statistical units in the case of equity securities. The balance-sheets for successive dates that are available from administrative sources will furnish little, if any, useful information for purposes of estimating the share of each of these circumstances in their differences. In fact, even if differences are due solely to transactions, they may not furnish a correct measure of the transactions because the value of dispositions, as well as of acquisitions, will usually be entered in business accounts at their cost at time of acquisition.

9.19. However, if estimates for successive dates are made from registers for selected financial claims or for land or through the means discussed above for stocks, fixed assets and non-reproducible tangible assets, the basis will, in many instances, also be available for estimating the share of transactions, changes in prices and, to a very limited extent, adjustments for unforeseen events and structural changes in statistical units. There are also certain kinds of financial claims, for example, cash, bank and other deposits, loans, and accounts receivable and payable, for which the differences between successive balance-sheet dates are mainly due to transactions during the period.

## Sources and methods of estimates

9.20. If the capital finance and balance-sheet accounts are as integrated as is proposed here, the estimates of capital transactions during the period between successive balance-sheet dates made in national accounting should furnish data on this element of the differences between the balance-sheet estimates. Suitable price index numbers will furnish the basis for adjusting balance-sheet data to market prices and for measuring the share of price changes in the balance-sheet differences. In general, in order to estimate the other relevant reconciliation items it will be necessary to gather data through special inquiries. Some of this information may be available from the special data required to estimate some of the balance-sheet entries.

9.21. Where probable changes between balance-sheet dates in the structure of statistical units or in the classification of balance-sheet items are being investigated, the special inquiries should concentrate on large statistical units in which these changes are suspected. Reconciliation items such as adjustments for unforeseen events, natural growth less depletions in timber tracts or new finds less depletions in subsoil deposits may be estimated by means of stratified sample inquiries. The collection of data on the natural growth of timber tracts, plantations, orchards and vineyards or fisheries presents serious problems if the information is unavailable from the records of the government departments concerned with these activities. A number of difficult surveys would need to be undertaken to obtain the required information.

### A programme of annual statistical inquiries

9.22. To compile and reconcile reliable data on balance-sheets for successive dates and on capital transactions and adjustments between these dates, it would be valuable to integrate the annual collection of data on stocks of, and transactions in, financial assets and liabilities and on stocks of and changes in non-reproducible tangible assets. As was indicated earlier in this chapter, reproducible tangible assets already may be adequately covered through inquiries conducted for purposes of the capital transaction accounts.

9.23. Annual sample inquiries should first focus on incorporated enterprises other than those well-regulated units, such as banks and other financial institutions and public utilities, for which adequate data are available from the records of the government agencies concerned. Later, the programme may be extended to a regular sample survey of households and their unincorporated businesses. It may be desirable to gather data on the major consumer durables of the sample households as well as on their financial assets and liabilities and non-reproducible tangible assets. In order to make the programme of coherent annual inquiries practicable, they should be sample surveys, probably based on one stage stratified sampling for incorporated enterprises and on two, or even three, stage stratified sampling for households. An increasing number of countries carry out or plan to conduct statistical field surveys of integrated balance-sheet and transaction data, in particular on financial assets and liabilities of enterprises.

9.24. The items of data sought in these surveys must of course be easily understood by respondents and be feasible to gather from their records or

recollections. This may make it impracticable in certain instances to gather information directly in the form desired for purposes of compiling balance-sheet and reconciliation estimates. For example, it will probably be necessary to allow small enterprises to report according to the closing dates for their business accounts though these dates may differ from those wanted and to adjust the data in the manner suggested in paragraph 9.9 above. Requesting balance-sheet data valued at market prices will probably be impracticable - in particular from smaller enterprises and households - for such items as land, fixed assets, long-term bonds and equity securities. In these instances, it may be feasible to request book values from all respondents and a listing of holdings, giving their identity, value and date for acquisitions and for disposals during the last period of account, for a subsample of the small enterprises and households. These data, coupled with the appropriate series of price indexes and the book values for all the respondents, can be used to estimate market values. Alternatively, the registers discussed in paragraph 9.17 above may be used for the inventory of land, long-term bonds and equity securities. It will be essential to simplify the character and classifications of the information sought from sample households.

### The indirect approach

#### Character and advantages of the approach

9.25. The indirect approach to compiling the balance-sheet accounts and tables eliminates the need to gather balance-sheet data but not transaction, price and other reconciliation data annually; balance-sheet estimates for a bench-mark date are extrapolated, year by year (or for other periods), by means of data on events during each year. The approach is equivalent to maintaining a perpetual inventory for each balance-sheet entry. The same approach may of course be employed to interpolate, year by year, between balance-sheet estimates for successive bench-mark dates. It is usually necessary to correct the extrapolated estimates for a run of years between bench-mark dates by interpolation when data become available for the more current bench-mark date. The use of the indirect approach not only reduces the task of gathering balance-sheet data but also hastens the compilation of balance-sheet accounts. It may make it practicable to compile quarterly balance-sheet accounts.

9.26. The worksheet in table 9.1 illustrates the use of the indirect approach in extrapolating bench-mark balance-sheet data and in interpolating between successive bench-mark figures. It is assumed that revaluation because of market price changes is the only reconciliation item.

9.27. The calculations in table 9.1 proceed in the following manner. In extrapolating the balance-sheet entry, 500, for the first bench-mark date, the balance-sheet estimate at the end of the preceding year is revalued to the end of the following year; and the revalued transactions during the latter year are added to arrive at the balance-sheet estimate as of the end of that year. It is assumed that transactions during the year in question have been evenly spread over it; thus their average price is reflected by the average index of prices for the year and their revaluation to the end of the year may be based on the ratio between the end-of-year index and the average index. In interpolation, the difference in the extrapolated estimate and the balance-sheet figures for the second bench-mark date is assumed to be due to inaccuracies in revaluation, that is, in the price indexes used for this purpose. The difference in the balance-

Table 9.1. Worksheet: Indirect method of compiling estimates of a balance-sheet item

	Year			
	First	Second	Third	Fourth
1. Price index, end of designated year	105.0	109.0	107.0	115.0
2. Price index, average during designated year	102.5	107.0	108.0	108.0
3. First bench-mark date, end of year preceding first year	500			
4. Extrapolated estimate at end of previous year		531	559	545
5. Row 3 and 4 revalued to end of designated year	525	551	549	586
6. Reported transactions during designated year	+6	+8	-4	+42
7. Transactions revalued at end of designated year	+6	+8	-4	+45
8. Extrapolated estimate at end of designated year	531	559	545	631
9. Second bench-mark date, end of fourth year				639
10. Discrepancy between extrapolated and interpolated estimates, end of designated year	+1	+2	+3	+8
11. Interpolated estimate, end of designated year	532	561	548	639
12. Transactions during designated year	+6	+8	-4	+42
13. Revaluations during designated year, interpolated estimates	+26	+22	-7	+52

sheet figures between the first and second bench-mark dates, after adjustment for transactions, is allocated to each year in proportion to the price index for the end of the year in question, setting the index at the first bench-mark date at 100.

#### The perpetual inventory of fixed assets

9.28. Perpetual inventories are commonly used to build up and maintain balance-sheet data on reproducible tangible fixed assets from annual or quarterly data on gross fixed capital formation, on capital consumption and on correlated price indexes of capital goods. This method is illustrated by the worksheet given in table 9.2. In this table straight-line depreciation is used and it is assumed that the asset concerned always has a life of four years. The data for lines a, b and c are assumed available from estimates used in the national accounts. The gross stock at, for example, the end of year 6 (line d) is the sum of line c in years 3, 4, 5 and 6, i.e.,  $800 + 800 + 1,000 + 1,300 = 3,900$ . Capital consumption in that year (line e) is  $\frac{3,900}{4} = 975$ . The increase in the net stock (line f) is line c less line e, i.e.,  $1,300 - 975 = 325$ . So net capital stock (line g) is  $1,350 + 325 = 1,675$ . The remaining lines are easily calculated. Lines i to m give the figures needed for the balance-sheets (i and m), capital transactions (j and k) and reconciliation accounts (l). The calculations can be improved by using survival curves, assuming, for example, that 25 per cent of assets last three years, 50 per cent last four years and 25 per cent last five years.

9.29. If figures for gross fixed capital formation are available by type of asset for each institutional sector of the economy, the method may be used for each sector.

9.30. It is not necessary to have bench-mark data from censuses or sample inventories of fixed assets; the starting figures of stocks may be built up by applying the perpetual inventory method over a sufficiently long period. However, if bench-marks can be obtained by other means, they will provide a most useful point of departure or check on the perpetual inventory method.

#### Sources and uses of required data

##### Transactions and prices

9.31. A number of the series of data on transactions and prices that are needed in using the indirect approach to making balance-sheet estimates may be available from work on areas of statistics other than balance-sheets.

9.32. If capital transaction and balance-sheet accounts are co-ordinated and integrated, the estimates of the capital transactions of institutional sectors and subsectors made for national accounting purposes can be used. These estimates will be useful provided they are based on data from administrative sources or special inquiries on the transactions themselves and not on differences in entries between successive balance-sheets. Some of the differences between these entries may be due to events other than transactions and may not properly reflect changes in the value of stocks, disposals of assets and redemptions of liabilities. Suitable data on changes in stocks, gross fixed capital formation and depreciation of fixed assets, classified by institutional sectors and subsectors, are the data most likely to be available from national income accounting. It will be necessary to develop independent, supplementary sources of information for estimates of non-reproducible tangible assets and financial claims classified by institutional sectors. These sources may consist of the registers or special inquiries discussed earlier in this chapter.

Table 9.2. Worksheet: Perpetual inventory method of compiling estimates of fixed assets from flow data a/

		Price basis	Year							
			1	2	3	4	5	6	7	8
Gross fixed capital formation	<u>a</u>	Current price	500	735	848	920	1 150	1 560	2 600	2 700
Price index, year 1 = 100	<u>b</u>		100	105	106	115	115	120	130	150
Gross fixed capital formation	<u>c</u>	Year 1 price	500	700	800	800	1 000	1 300	2 000	1 800
Gross capital stock at end of year	<u>d</u>	"	500	1 200	2 000	2 800	3 300	3 900	5 100	6 100
Capital consumption	<u>e</u>	"	125	300	500	700	825	975	1 275	1 525
Annual increase in net stock	<u>f</u>	"	375	400	300	100	175	325	725	275
Net capital stock at end of year	<u>g</u>	"	375	775	1 075	1 175	1 350	1 675	2 400	2 675
Net capital stock at end of year	<u>h</u>	Current price	375	814	1 140	1 351	1 552	2 010	3 120	4 013
Stock at beginning of year	<u>i</u>	"	0	375	814	1 140	1 351	1 552	2 010	3 120
Gross fixed capital formation	<u>j</u>	"	+500	+735	+848	+920	+1 150	+1 560	+2 600	+2 700
Capital consumption	<u>k</u>	"	-125	-315	-530	-805	-949	-1 170	-1 658	-2 288
Revaluation <u>b/</u>	<u>l</u>	"	-	+19	+8	+96	-	+68	+168	+481
Net capital stock at end of year	<u>m</u>	"	375	814	1 140	1 351	1 552	2 010	3 120	4 013

a/ For the sake of simplicity it is assumed that there was nil stock before year 1.

b/ Conceptually, revaluation of gross stock less revaluation of accumulated capital consumption.

9.33. Series of price indexes which are useful in revaluing balance-sheet assets may be available from the work of statistical, administrative or other authorities on prices of stocks and fixed assets, of land used for residential, industrial or commercial purposes and of equity securities. In fact, the former price series are needed to compile national accounting data on increases in stocks and perpetual inventories of fixed assets. However, difficulties may be encountered in using these data because they may not be classified according to institutional sectors. The same sort of difficulties will be encountered with available series of price indexes on land and securities. Thus it will be necessary, ideally, to compile special price indexes for the mix of a given kind of asset held by each of the institutional sectors and subsectors, using the most detailed series of prices available, weighted in terms of the mix of the assets in question at bench-mark dates. More detailed classification of the available price indexes on the various types of assets would, in general, be valuable for purposes of applying both the indirect and direct approaches to estimating balance-sheet entries.

9.34. For non-reproducible tangible assets such as timber tracts and subsoil deposits, information would be needed on trends in net income and in rates of return for purposes of revaluation. Data on net income should be available from national accounting work; information on expected rates of return would need to be gathered independently from the enterprises engaged in these activities.

#### Other reconciliation items

9.35. While information on changes in the institutional sector and subsector of statistical units and in the classification of financial assets and liabilities may be available from the collection and compilation of data on capital transactions in national accounting, information for purposes of compiling reconciliation items such as the natural growth less depletions of timber tracts, plantations or fisheries and new finds less depletions of subsoil deposits will need to be collected from administrative sources or in special inquiries as part of the work on the indirect approach to balance-sheet estimates. Information on structural changes in statistical units may be available from government forestry departments for timber tracts, from agricultural ministries for plantations, from natural resources or mining departments for subsoil deposits, and from the administration of company acts, anti-monopoly acts and/or regulatory agencies. Special inquiries designed to obtain this information should be small in scale in view of the number and complexity of the questions that have to be asked.

#### Developing a system of balance-sheet and reconciliation accounts

##### Research into availability of data

9.36. The first steps in developing a system of balance-sheet and reconciliation accounts and tables should be (a) the design of these accounts and tables and (b) a comprehensive inventory and evaluation of the sources and series of data which are already available for this purpose. As is indicated earlier in this chapter, many of the kinds of data required may already be available from government and private administration, from statistical field inquiries and from compilations for other purposes, in particular, for the purpose of compiling capital transaction accounts and tables and price statistics. However, some of the available series of

data may not be suitable at all or may need modification or supplementation for purposes of balance-sheet work. A means of assessing the suitability of the data is to attempt the preliminary even if sketchy compilation of the proposed balance-sheet and reconciliation accounts and tables. This should not only indicate the limitations of the available data and suggest the modified, supplementary and new series of data that need to be gathered but also reveal the alterations required in the proposed balance-sheet and reconciliation accounts and tables.

9.37. As part of the design of the body of data that is to be developed, it will be necessary to decide on the approaches to be used in estimation and the sources, means and methods of gathering supplementary and new series of data. In general, it may be necessary to use differing combinations of the direct and indirect approaches to estimation for each of the institutional subsectors. It would be desirable to use both the approaches, if feasible, in order to furnish cross-checks.

9.38. The research mentioned above should furnish the basis for planning the gradual development of the system of balance-sheet and reconciliation accounts and tables. The paragraphs below deal primarily and briefly with the orders of priority that may be assigned to balance-sheet and reconciliation accounts for each of the institutional sectors, in the light of the urgency of the needs for the information and the possibilities and problems of compiling the data.

#### Financial institutions

9.39. The compilation of balance-sheets and reconciliation accounts and tables for financial institutions, in particular banks, insurance companies and the like, should be and in general are assigned the highest order of priority. The accounts and tables are usually easier to compile than those for other sectors and the economy as a whole.

9.40. In most countries, study of the available series of data for financial institutions, especially banks and insurance companies, is likely to indicate that many of the series of data needed to compile balance-sheets and reconciliation accounts are already gathered by regulatory or statistical authorities or could be relatively easily compiled from administrative records. It should none the less be expected that some of the available data will need to be modified, supplemented or corrected. For example, intrasector transactions in financial claims may have been consolidated out or intrasector assets and liabilities may not be equivalent; figures of fixed assets or securities may not be at market prices; the corresponding balance-sheet and transaction items may be inconsistent. None the less, the task of developing useful balance-sheet and reconciliation data will probably be found to be easier for financial institutions than for other institutional sectors.

9.41. The balance-sheets and transaction data on the financial assets and liabilities of financial institutions may be used not only for studies of these institutions but also for the compilation of data for the economy as a whole and for other institutional units. The balance-sheets would yield data for studies of monetary conditions and policies, the availability of credit and the liquidity and portfolio behaviour of financial institutions. Their registers of currency, deposits, loans, bonds and other securities would yield valuable data on selected financial assets and liabilities of other resident institutions and of the rest of the world. In order to compile balance-sheets for the rest of the world as well as for certain studies of monetary conditions, it is advantageous to compile consolidated balance-sheets for the financial institutions.

## General government

9.42. The development of balance-sheets and reconciliation accounts of the subsectors of government should be undertaken after starting work on financial institutions. The accounts and records maintained by these bodies for administration and management, which would be the prime source for basic balance-sheet and reconciliation data, may be available to the statistical authorities. Moreover, these data are needed for monetary and fiscal analysis, assessment of the government's role in the economy and measurement of the assets of residents in government securities, of the resident assets and liabilities of the rest of the world and of national wealth. For purposes of delineating the financial links between government, on the one hand, and other resident sectors and the rest of the world, on the other, and for purposes of obtaining data on the latter sectors from the government accounts, it will be advantageous to compile consolidated balance-sheets and reconciliation statements for general government. On the whole, greater priority should be assigned to the compilation of data for the central government than for state and local governments. The required accounts and records of the former will usually be more readily available and better organized for statistical use; the requirements for balance-sheet data for central government are also considerably more urgent than for local government. It will usually only be feasible to obtain the administrative accounts and records for a sample of state and local governments. Sometimes it may be necessary to obtain the most needed information by means of questionnaires mailed to the authorities in question.

9.43. Using the available accounts and records of government bodies to compile balance-sheets and reconciliation accounts is a sizable task. In order to gather the wanted data on stocks and fixed assets, it will probably be necessary to engage in the classification and summarization of figures on quantities and costs of acquisition from detailed records and accounts. Valuation of these assets will raise additional problems. Compilation of data on non-reproducible tangible assets such as land, subsoil deposits and commercial forest tracts will present major difficulties. The data will probably need to be built from listings of the magnitude, uses and operations, incomes etc. of these various assets, coupled with series of relevant market prices and capitalization ratios. The problems of compiling the desired data on financial assets and liabilities are likely to be much less severe than those of compiling data on real assets. The classifications used in the administrative accounts of government bodies will probably approximate those of the balance-sheet accounts closely enough and the required unit-values for assets and liabilities are likely to be available from organized markets.

## Corporate and quasi-corporate non-financial enterprises

9.44. Compilation of complete balance-sheet and reconciliation accounts and tables of corporate and quasi-corporate non-financial enterprises should probably be assigned a second order of priority. Gathering the required basic data is likely to be a formidable task and the accounts and tables are less potent sources of information for over-all monetary and financial analysis. The balance-sheet and reconciliation accounts and tables of corporate non-financial enterprises however furnish fundamental information on the amount and distribution of the tangible resources and wealth of an economy, on the sources and demands for investments and on the economic health and financial behaviour of major producers of goods and services. Because data on public non-financial enterprises are likely to be more readily available than data on the private corporate and quasi-corporate enterprises, attention may first be devoted to the former units.

9.45. Data on balance-sheets but not on reconciliation items and capital transactions of corporate and quasi-corporate non-financial enterprises may be available from income-tax statistics, from authorities in charge of company registration or the regulation of public utilities, from information required by stock exchanges and from company reports to stockholders. Such available data should of course be employed in the first attempts at compiling balance-sheets for these units. However, as is emphasized earlier in this chapter, the available balance-sheet data are likely to be insufficiently standardized and inappropriately classified and valued for purposes of compiling the balance-sheet accounts. It will therefore be necessary to take steps to standardize and improve these balance-sheets and to supplement them by information from administrative registers, from national accounting and other statistical activities and from special ad hoc field surveys; or to develop and conduct a coherent sample field inquiry into data on balance-sheets, on transactions in financial claims and on the reconciliation of successive balance-sheets, coupled with use of series from other statistical programmes. The desirability and feasibility of the latter approach will depend on the potentialities, problems and difficulties of relying primarily on statements that are a by-product of administrative and other statistical activities as compared to those of a field inquiry.

#### Private non-profit institutions serving households

9.46. The compilation of balance-sheet and reconciliation accounts and tables on private non-profit institutions may be assigned a low order of priority. It may not be difficult to compile the accounts and tables from data which are submitted to government income tax or regulatory authorities. However, the requirements for the data are not urgent, since the private non-profit organizations usually play a minor role in an economy.

#### Households, including unincorporated non-financial enterprises

9.47. Since little, if any, usable direct information on the balance-sheets of households and unincorporated non-financial enterprises included in the household sector will be available from administrative and similar sources, the compilation of balance-sheet and reconciliation accounts and tables for them may be assigned the lowest order of priority. However, as balance-sheet and reconciliation accounts are gradually compiled for other institutional sectors, it should be feasible to build up figures for at least some of the financial assets and liabilities of households, including their unincorporated non-financial enterprises. This would, for example, be so for their holdings of bills and bonds, corporate equity securities and equity in life insurance and pension fund reserves. The compilation of data on the fixed assets of the nation as a whole and of the other institutional sectors would also yield residuals that could be taken to be the household holdings of these assets. For purposes of the compilation of complete and integrated balance-sheet and reconciliation accounts and tables on households, including their unincorporated enterprises, it would be necessary to develop a recurrent sample household inquiry and to check and supplement the figures gathered by data derived from the preparation of the accounts and tables for other institutional sectors and from other statistical programmes.

#### The nation as a whole

9.48. Based on the data on the financial claims of financial institutions, general

government, non-financial corporations and the rest of the world, it should be feasible to compile balance-sheets on the claims for the nation as a whole and for each institutional sector. Consolidated data on households and private non-profit institutions serving them may be derived from the information gathered from the other institutional sectors, if they are not otherwise available.

9.49. Balance-sheet data on the stocks and reproducible assets of the nation as a whole and of the institutional sectors may also be assigned a relatively high order of priority. These assets make up an important part of the capacity to produce and of national wealth and, as is indicated above, are not very difficult to compile by means of the perpetual inventory method.

#### The rest of the world

9.50. Though the rest of the world is not, strictly speaking, an institutional sector, the compilation of at least balance-sheet and capital-finance data on the financial assets and liabilities of residents in respect of non-residents deserves special attention. These data, coupled with comparable data on the financial assets and liabilities of financial institutions and of general government, furnish the basis for studies of the liquidity of the economy and of monetary and balance-of-payment policies. Data on selected foreign financial assets and liabilities are of course also needed to measure the international reserves and offsets to these reserves of a country. For such purposes data on the outstanding financial claims between residents and non-residents are called for in standard tables 34 and 35 proposed in this document and data on the corresponding transactions in claims are called for in standard tables 24 and 26 of the SNA report.

9.51. While the uses mentioned above indicate that the compilation of balance-sheet data on foreign financial assets and liabilities merits a high order of priority, the estimates cannot be made before relatively reliable data are available on the outstanding claims between resident non-financial corporations and the rest of the world as well as between financial institutions and general government and the rest of the world. These claims may be significant between foreign subsidiaries and their parent companies and in the case of corporate equity securities and deposits. It may be necessary to undertake a periodic special inquiry, at least of large non-financial corporations, to gather this information. It is best to collect the data on foreign financial claims as part of information on both resident and non-resident outstanding financial assets and liabilities of the corporate and quasi-corporate enterprises.



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