UNITED NATIONS

ECONOMIC
AND
SOCIAL COUNCIL

Distr.
GENERAL

E/CN.3/398
29 July 1969

ORIGINAL: ENGLISH

STATISTICAL COMMISSION
Sixteenth session
Item 7 of the provisional agenda

THE PROPOSED BALANCE SHEET AND REVALUATION ACCOUNTS OF THE SYSTEM OF NATIONAL ACCOUNTS (SNA)

Report of the Secretary-General

69-16758

Table of contents

Table of contents (continued)

CHAPTER I. INTRODUCTION

A. Purpose and scope of report

1.1 Accounts in respect of national and sector balance sheets and the revaluation of these holdings of assets and liabilities are an integral part of the present System of National Accounts (SNA). The international guidelines in respect of the SNA which the fifteenth session of the Statistical Commission adopted delineated the place, structure and basic concepts of these accounts within the framework of the system, but did not include specific definitions, classifications or standard accounts and tables in respect of balance sheets and revaluations.[1/] The Commission therefore requested that detailed international guidelines in respect of the balance sheet and revaluation accounts of the SNA should be drafted and that a report on this work should be submitted to the sixteenth session.

1.2 This document gives the proposals concerning the detailed international guidelines in respect of the balance sheets and revaluation accounts of the SNA which have been formulated since the fifteenth session of the Statistical Commission. Dealt with are the concepts and definitions, classifications and standard accounts and tables of this part of the SNA. This paper does not cover all of the topics which it is thought should be included in the international guidelines. Omitted is a discussion of the statistical sources and practical methods of compiling the data of the balance sheets and revaluation accounts. It is proposed that this topic should be dealt with in the document to be prepared for purposes of another round of discussions and consultations in respect of the draft guidelines after the sixteenth session of the Statistical Commission considers this paper.

1.3 The proposals set out in this paper were drafted by Professor J.R.S. Revell, as consultant to the Statistical Office of the United Nations. He will also prepare the additional chapter on the statistical sources and methods of compiling balance sheets and the attendant revaluation accounts.

1/ See Chapters I and II, A System of National Accounts, Series F, No. 2, Rev. 3, United Nations, New York, 1968.

B. Relation to adopted SNA guidelines

1.4 This document has been designed so as to be a draft of a supplement to the publication, A System of National Accounts [2]. It has therefore been prepared on the model of the published international guidelines in respect of the present SNA. With this end in view, it aims, wherever possible, to give definite proposals rather than to set out points for discussion. These suggestions proceed from a thorough examination of the conceptual problems of balance sheets, which will in certain instances not be as familiar as the concepts of the transaction accounts of the SNA. To avoid bringing too much detail into the discussion, reference is made in the text of the paper to select works which contain extensive examinations of the points raised. The list of these references is annexed to this paper.

1.5 Although the concepts applicable to balance sheets and the attendant revaluation accounts are in certain ways unique, the proposals in respect of these accounts have been largely dictated by decisions already taken in respect of the SNA as a whole and the details of the transaction accounts. The balance sheets and revaluation accounts proposed in this paper have been designed to fit completely into the SNA as it has already been adopted and issued. Since the discussions and consultations which preceded the adoption of the international guidelines were extremely thorough and took into account problems of accommodating balance sheets and revaluation accounts, this has generally been possible without difficulty. However, there are a few decisions in respect of the transaction accounts of the SNA which cause difficulties in the case of balance sheets. These points are generally relatively minor in the context of the transaction accounts, but they conflict with the concepts of balance sheets as proposed here. The treatment of the transaction accounts has therefore been queried in the text of this paper on a few occasions.

C. Contents of report

1.6 The order of this paper is as follows. Chapter II describes the structure of balance sheets and their relationship to the capital finance

---

2/ Op. cit.

accounts and the revaluation accounts of the SNA. It also indicates the purposes which this extension of the accounts to cover all the financial aspects of national accounting may be expected to serve. Chapter III details the schemes of classification and the definitions which are necessary for the extension of the accounts of the system, and shows how classification schemes and definitions developed for the transaction accounts fit into balance sheets and revaluation accounts. Chapter IV deals with the conceptual and practical problems of valuation, which is the feature distinguishing balance sheets from the other accounts of the SNA. Chapter V sets out the standard accounts and supporting tables in addition to those already included in the international guidelines which are needed in order to accommodate balance sheets and revaluation accounts.

1.7 It was suggested above that an additional chapter should be included in the guidelines in respect of balance sheets concerning the statistical sources and practical problems of compiling balance sheets. One feature of this chapter which should be of particular interest is the distinction to be made between two methods of compiling balance sheets. The first is the use of sources which themselves give balance sheet information. One major problem with their use is the delay in publication and in collation of the necessary information. It is therefore suggested that a second method will be necessary if balance sheets are to be produced at the same time as other accounts of the system. This second method consists of proceeding from the last firm figures obtained by the first method and of computing a balance sheet for more recent periods by adding on transactions from the capital finance account and revaluations. Under the first method revaluations would be treated largely as a residual, whereas under the second method they would have to be independently estimated. Some consideration will be given in the additional chapter to the problems of obtaining the necessary price index series for the independent estimation of revaluations.

D. Consultations and future work

1.8 This paper will be the subject of discussions and consultations before being considered by the sixteenth session of the Statistical Commission. It

will be discussed by a meeting of the Working Group on National Accounts and Balances of the Conference of European Statisticians and will be circulated to national statistical authorities for comment. A paper outlining the proposals in respect of the balance sheet and revaluation accounts will also be discussed at the Eleventh General Conference of the International Association for Research in Income and Wealth. The Statistical Commission in considering the proposals in this paper may wish to indicate the lines along which work should continue on detailing the balance sheet and revaluation accounts of the SNA so that the seventeenth session of the Commission may be in a position to adopt detailed international guidelines concerning this subject.

CHAPTER II. STRUCTURE AND USES OF BALANCE SHEETS AND REVALUATION ACCOUNTS

2.1 This chapter furnishes a short introduction to the place and purpose of balance sheet and revaluation accounts in the SNA. It describes the structure of the balance sheet accounts and the way in which the opening and closing balance sheets in respect of a period of account are linked by the capital finance and revaluation accounts of the period. The chapter also outlines the substantive and instrumental uses of balance sheets and their attendant revaluation accounts.

A. Structure of the accounts

1. The balance sheets

2.2 Table 2.1 is designed to illustrate the structure of balance sheets. It consists of a summary of the figures from table 2.1 of A System of National Accounts [3] for the opening balance sheet.

2.3 To begin with we may consider the balance sheet of each institutional sector and of all institutional sectors as detailed in the first six columns on either side of table 2.1. The first and obvious point is that each balance sheet balances in the sense that the total of financial assets and net tangible assets equals the total of liabilities and net worth. As elsewhere in the balance sheets, corporate equity securities are treated as a liability of the transactor which issues them. It will be noted that in the balance sheets of individual sectors and of all institutional sectors financial assets do not equal liabilities and that net tangible assets are not equal to net worth.

3/ Op. cit.

Table 2.1 Opening assets and liabilities

Assets	Non-financial enterprises	Financial institutions	General government	Households	Private non-profit institutions	All institutional sectors	The rest of the world	Total	Liabilities	Non-financial enterprises	Financial institutions	General government	Households	Private non-profit institutions	All institutional sectors	The rest of the world	Total
Currency and deposits	23	68	12	170	2	275	52	327	Currency and deposits	8	184	103	1	0	296	31	327
Securities	32	153	9	250	13	457	36	493	Securities	235	62	145			442	51	493
Other	126	120	125	144	2	517	77	594	Other	151	102	141	82	3	479	115	594
Financial assets	181	341	146	564	17	1249	165	1414	Liabilities	394	348	389	83	3	1217	197	1414
Net tangible assets	304	18	133	193	13	661		661	Net worth	91	11	-110	674	27	693	-32	661
Total	485	359	279	757	30	1910	165	2075	Total	485	359	279	757	30	1910	165	2075

Table 2.2. Financial accounts - total accounts

Assets	Opening assets	Acquisition of assets	Revaluations	Closing assets	Liabilities	Opening liabilities	Incurrence of liabilities	Revaluations	Closing liabilities
Currency and deposits	327	20		347	Currency and deposits	327	20		347
Securities	493	8	-27	474	Securities	493	8	-27	474
Other	594	48	4	646	Other	594	48	4	646
Financial assets	1414	76	-23	1467	Liabilities	1414	76	-23	1467
Net tangible assets	661	28	42	731	Net worth	661	28	42	731
Total	2075	104	19	2198	Total	2075	104	19	2198

2.4 In order to consider the structure of a balance sheet further it is necessary to include a balance sheet for the rest of the world and to add a total column, which is the sum of the balance sheets of all institutional sectors and the rest of the world. This is done in the last two columns on either side of table 2.1. The balance sheet of the rest of the world contains as assets those financial claims issued as liabilities by residents which are held as assets by non-residents and contains as liabilities those financial claims issued as liabilities by non-residents which are held as assets by residents. It is thus a consolidated balance sheet of the rest of the world, showing only links between the rest of the world and the country in question. Because the value of direct investment is included among the financial claims in either direction, there are no figures for net tangible assets in the balance sheet of the rest of the world.

2.5 It will be noticed immediately that the total column is identical on the assets and liabilities sides of the balance sheet. For this identity to hold without adjustment entries it is necessary that the method of valuation should be the same for financial claims when they are held as assets as when they are issued as liabilities; the system of balance sheets here proposed provides for the same basis of valuation in both cases. Given this identity between the two total columns, we can establish certain propositions about the structure of balance sheets:

(1) The total value of each type of financial claim held as an asset is identical to the total value of each type of financial claim issued as a liability.

(2) It follows that the total of all financial claims held as assets is identical to the total of all financial claims issued as liabilities.

(3) The total value of net tangible assets is identical to total net worth.

The first two propositions follow automatically from the dual nature of a financial claim, that it is simultaneously an asset of one transactor and a liability of another.

2. National wealth

2.6 Table 2.1 also enables us to demonstrate the two alternative methods of computing national wealth. Because financial claims can be cancelled out, the basis of national wealth is obviously the value of net tangible assets, but in the balance sheet for any one country, as represented by the balance sheet for all institutional sectors, this cancellation is incomplete on account of claims of residents against non-residents and by non-residents against residents. The balance sheet of the rest of the world with which we have completed table 2.1 in order to demonstrate that the cancellation is complete in a closed system of balance sheets shows as assets claims by non-residents against residents and as liabilities claims by residents against non-residents. If the sign of the net worth in this balance sheet of the rest of the world is reversed, the resulting figure is equivalent to the net claims of residents against the rest of the world.

2.7 The two alternative expressions of national wealth can now be seen in table 2.1:

(i) It is obvious that one of them must be the net worth of all institutional sectors, since this column is the combined balance sheet of all transactors in the country and includes among the assets claims by residents against the rest of the world and among the liabilities claims by the rest of the world against residents.

(ii) The net worth of all institutional sectors can be seen to be equal to the total value of all tangible assets plus net claims by residents against the rest of the world (the net worth of the rest of the world with its sign reversed), that is 693 = 661 + 32.

3. Relationship between balance sheet, capital finance and revaluation accounts

2.8 Table 2.2 is designed to show two sets of relationships: (i) the relationship between the capital finance account, the revaluation account and opening and closing balance sheets and (ii) the structure of capital

finance accounts and revaluation accounts. Once again the figures are derived from table 2.1 of A System of National Accounts [4]. All items relate to the total column, that is to the total of all institutional sectors and the rest of the world. The figures in the opening balance sheet are thus a repetition of the figures in the total column of table 2.1.

2.9 The first point stands out clearly. It is that the capital finance account and the revaluation account between them cover the entire difference between opening and closing balance sheets. This can be stated as two propositions:

(4) Opening assets + acquisition of assets -- revaluations = closing assets

(5) Opening liabilities + incurrence of liabilities + revaluations = closing liabilities.

These two propositions are of general application in that they are true of each institutional sector, of all institutional sectors and of the rest of the world; they do not apply only to the total column. It will be noted that this sequence is exactly the same as that used in the perpetual inventory calculation.

2.10 It is also apparent that the two sides of table 2.2 are identical in every respect. The first column on either side must obviously be identical because they are the figures about which we established propositions (1) through (3); and the same propositions will also hold for the closing balance sheet in the last column on either side. The fact that the capital finance account and the revaluation account also yield identical figures on either side of the table enables us to state four further propositions:

(6) For each type of financial claim separately and for the total value of all financial claims, the total value acquired as an asset is identical to the total value incurred as a liability.

(7) For each type of financial claim separately and for the total value of all financial claims, the revaluation of assets is identical to the revaluation of liabilities.

4/ Op. cit.

(8) The value of net tangible assets acquired is identical to the increase in net worth before revaluations have been taken into account.

(9) The revaluation of net tangible assets is identical to the revaluation of net worth.

Propositions (6) through (9) are the counterpart for the capital finance account and the revaluation account of propositions (1) through (3) for the balance sheet. In other words, all three sets of financial accounts have the same basic structure. Both sets of propositions apply only to the total column, and not to individual institutional sectors, all institutional sectors or the rest of the world.

B. Uses of the accounts

2.11 National accounts of all types are designed to provide statistical information about various aspects of an economy, and nobody can foresee all the different uses to which they will be put, any more than a map maker can foresee all the detailed uses to which his maps will be put. In this section we can do no more than indicate a few of the more important uses, and we shall concentrate on those uses which impose certain restrictions on the form of balance sheets and revaluation accounts and on those uses for which international comparability is of particular importance. We shall refer to substantive uses, which lead to improvements in the description and analysis of the economic process, and instrumental uses, which lead to improvements in the construction of national accounts.

1. Substantive uses

2.12 Balance sheets and their attendant revaluation accounts add a new dimension to national accounts by providing links between successive time periods to supplement the links between flows in the system recorded elsewhere in the accounts. The balance sheet, capital finance and revaluation accounts between them provide a complete picture of the financial process, showing stocks of assets and liabilities at various points of time and fully accounting for changes in stocks. They distinguish between two kinds of

change in stocks: the active change brought about by transactions as shown on the capital finance account and the passive change suffered by transactor units mainly as a result of price changes. The principal use of these accounts will undoubtedly be one internal to each country, the exploring and analysis of financial behaviour. This analysis will be of the behaviour of the financial system as a whole and of the behaviour of different types of financial institutions and non-financial transactors. The general availability of accounts which show for all institutional sectors of the economy stocks, flows and revaluations can be expected to bring considerable theoretical advances in a field which is already developing fast, the theory of financial behaviour.

2.13 The next substantive use of balance sheets and revaluation accounts raises the question of international comparability, but not in a particularly acute form. It is the analysis of the structure of national wealth or more exactly of the stock of tangible assets. The prime example will be found in Goldsmith (3). The purpose of the analysis is, firstly, to show the structure of the stock of tangible assets, the proportions of land, buildings, producer durables, consumer durables and other elements in the value of the total stock and ratios between various parts of the stock, and, secondly, to account for changes in the structure by reference to accumulation and price changes. It is for this purpose, rather than for the balance sheets of institutional sectors, that the distinction between the value of land and of the buildings erected on it is important.

2.14 It is when this analysis is extended to cover the whole structure of national and sector balance sheets, bringing in financial assets, liabilities, non-financial intangible assets and net worth as well as tangible assets, that international comparability becomes of prime importance because of the illumination afforded by comparisons of the structures in different countries. Examples of this type of analysis will be found in Goldsmith (4) and Revell (5).

2.15 Analysis of the structure of national and sector balance sheets is still at an early stage, but the general availability of balance sheets and

revaluation accounts will undoubtedly bring about a rapid advance in techniques. The first general measure of financial structure is the financial inter-relations ratio, which measures the ratio of the value of financial claims in issue to the value of national wealth or of tangible assets. International comparisons are made, and the analysis is extended to account for changes and differences in ratios. At this stage two further elements are brought into the picture: the structure of the financial system in terms of different types of claim and the shares of institutional sectors in tangible assets, financial assets, liabilities and net worth. Because institutional sectors customarily differ in their reliance on outside finance as against retained savings, the share of institutional sectors in the ownership of tangible assets is of great importance in explaining differences in the structures of national balance sheets between countries. The analysis also considers the extent to which financial institutions enter into the provision of outside finance; their importance is that their intervention leads to the issue of two financial claims in place of the one that will suffice when lender and borrower are in direct contact. The revaluation account enters into the picture because inflation and differential price changes among financial claims explain many of the differences between countries in the level of the financial inter-relations ratio.

2.16 This extremely bald account of the basis of financial analysis serves to illustrate the kind of information on which the analysis depends. The question of international comparability enters in two forms. The first is that of a common basis of valuation; since the system of national accounts imposes such a common basis, there should be little trouble on this score. The second is the definition of the statistical unit within each of the institutional sectors. As we shall see in chapter III, a common approach to the definition of the statistical unit is both the most important and perhaps the most difficult factor in ensuring international comparability. Its importance derives from the fact that financial links within statistical units are to be consolidated out of balance sheets and other financial accounts, leaving only financial links between independent statistical units. The principle behind the definition of the statistical unit is clear enough:

since financial accounts are designed to illuminate financial behaviour, we should define the statistical unit in terms of the transactors which are in a position to take independent financial decisions. In practice this may be difficult to achieve because of lack of information, but it is still the single more important feature of the compilation of balance sheets. Apparent large differences in balance sheet structure between countries may be due to no more than a different approach to the definition of the statistical unit. Of particular importance is the definition of the statistical unit within the sector of corporate and quasi-corporate enterprises (the legal entity and the family of entities under common ownership) and the treatment within general government of various agencies of a quasi-government character which are very active in the financial sphere.

2. Instrumental uses

2.17 The link between transactions in financial claims and all other transactions is the concept of net lending, representing the financial surplus or deficit of each institutional sector. The figure for net lending is derived as a relatively small residual between two large figures for total incomings and total outgoings; what amount to very small relative errors in the figures for incomings and outgoings are magnified in their relative impact on the figure for net lending. The residual figure for net lending is equal in principle to the acquisition of financial assets less the incurrence of liabilities. It is rare to find a close coincidence in the figures for net lending arrived at from the two sets of transactions; and this should lead to attempts to refine the computation in both cases until the two figures for net lending are brought into reasonable proximity to one another.

2.18 The nine propositions which we established above for the structure of all three forms of financial account provide a comprehensive series of checks on the internal consistency of the accounts. These checks take the following form:

(i) The total of each type of financial claim held as assets should equal the total of the same type in issue as liabilities.

(ii) The total of each type of financial claim acquired as assets during a period should equal the total of the same type incurred as liabilities during the period.

(iii) The total of revaluations of financial assets should equal the total of revaluations of liabilities.

The figures for institutional sectors in all three accounts will be obtained from a variety of statistical sources, and these checks are of great importance in refining the compilation of the capital finance, revaluation and balance sheet accounts. Since these checks are not available whenever a figure for a particular institutional sector is obtained as a residual between the estimates for other institutional sectors and a reasonably accurate total, it is very important to estimate figures for all institutional sectors independently whenever this is at all possible.

C. Conceptual basis of balance sheets

2.19 The incorporation of balance sheets into the system of national accounts raises several conceptual points which are peculiar to balance sheets and which are therefore less familiar than the concepts of the transaction accounts. These points are developed in the subsequent chapters, and are made the basis of the detailed proposals. It may be convenient to have the six major propositions summarised here, with a reference to the paragraphs of subsequent chapters in which the proposition is discussed.

(i) The balance sheets of institutional sectors should be the combined balance sheets of all independent statistical units within the institutional sector (paragraph 3.12).

(ii) It follows that the only assets and liabilities which may be included in the balance sheets of institutional sectors are those which can be attributed to independent statistical units; assets which could be described as the 'collective wealth' of an institutional sector are not admissible (paragraphs 3.12 through 3.14).

(iii) Only those items which can be valued with certainty may be included in balance sheets; in particular, there is no

place for contingent liabilities and the equivalent assets (paragraphs 3.15 through 3.18).

(iv) The valuation of both assets and liabilities in balance sheets should be at current market value (paragraphs 4.4 through 4.7).

(v) Because the balance sheets of transactors are notionally drawn up as at the same moment of time, the assumption must be made that the transactors are continuing in their present line of business and on the present basis; the market prices used for valuation should not reflect any penalty arising from liquidation in conditions of distress (paragraphs 4.8 and 4.9).

(vi) Each item in a balance sheet should be valued separately (paragraph 4.10).

CHAPTER III. CLASSIFICATION

3.1 This chapter is devoted to the classifications and definitions needed for balance sheets and revaluation accounts. The classifications are of three kinds: (i) a classification of transactors, (ii) a classification of assets and liabilities and (iii) a classification of revaluations according to the cause of revaluation. Each of these will be considered in turn, together with any conceptual points that arise in connection with the definition and classification of entries in balance sheets and revaluation accounts.

3.2 As we have seen, the capital finance accounts are organically linked to the balance sheets and revaluation accounts. The definitions and classifications needed for the capital finance accounts have already been developed in chapters V, VI and VII of A System of National Accounts[5/]. It is obvious that the system there laid down should be taken over into balance sheets and revaluation accounts. This can be done with only very minor modifications and extensions. The classifications outlined in this chapter have been designed to fit into the system as it has been laid out so far without necessarily providing the best answers for the problems of balance sheets and revaluation accounts considered on their own. However, many of the points which are touched on lightly in the context of the capital finance accounts or which are not specifically mentioned, assume much greater importance in the context of balance sheets and revaluation accounts. It will therefore be necessary to amphasise these points.

A. The classes of transactors

3.3 The classification of the institutional sectors, which are the transactors on the capital finance accounts and hence also on balance sheets and revaluation accounts, is given in detail in table 5.1 of A System of National Accounts[5/]. No amendments are necessary, but there are three points about the statistical unit which need emphasis.

5/ Op. cit.

1. Statistical Units

3.4 It would not be an exaggeration to say that uniformity of treatment between countries in the matter of the statistical unit used for the compilation of balance sheets is the single most important factor in ensuring international comparability. As we saw in the previous chapter, the balance sheet is of great importance in comparing the financial structure of different countries. The analysis proceeds by comparing the total value of financial assets with the value of tangible assets and by comparing the percentage shares of institutional sectors in non-financial assets, financial assets, liabilities and net worth. All these factors can be varied within very wide limits by different definitions of the transactor unit to be employed. Since the balance sheets of institutional sectors are combined balance sheets, all the financial links between independent transactor units are to be displayed, while all financial links within transactor units are consolidated out of the picture.

a. Corporate and quasi-corporate enterprises

3.5 The question of the appropriate statistical unit to be employed in each of the institutional sectors of the capital finance accounts is discussed exhaustively in chapter V of A System of National Accounts[6/]. There is no need to amend anything that is said there, but only to emphasise the especial importance in balance sheets of as great a degree of international uniformity as is possible in the statistical unit employed for corporate and quasi-corporate enterprises, whether non-financial or financial. This is likely to be a much more pressing problem in the compilation of balance sheets than in any other part of the system because far greater reliance is placed on the accounting documents of enterprises.

3.6 The statistical unit that is recommended for use in the case of corporate and quasi-corporate enterprises in most instances in paragraphs 5.60 through 5.63 of A System of National Accounts[6/] is the family of commonly-owned entities falling in the same institutional sub-sector. For example, a family consisting of three non-financial enterprises would be one transactor unit, whereas a family consisting of a non-financial enterprise, an insurance

---

6/ Op. cit.

company, a bank and a hire-purchase company would be four entities. (The question of the way in which the links of ownership between the various entities of a family are to be shown in the balance sheets is considered below in paragraphs 3.29 and 3.30). It was recognised in paragraph 5.63 that many countries would find it difficult to put this recommendation to use, and would therefore need to use the legal entity or its equivalent as the statistical unit. It is important to realise that the use of the entity rather than the family as the basic statistical unit will not only impair international comparability, but will also mean in most cases that balance sheet figures are incorrect. This is so because in countries where it is impossible to obtain consolidated balance sheets for families of entities the individual legal entities within the family are usually permitted to have different balance sheet dates. Even without a deliberate attempt to "window dress" the balance sheet, the total of balance sheets drawn up at different dates is different from the total on any one day, but the family usually finds it impossible to resist the temptation to shuffle assets and liabilities within the family on the balance sheet date of each legal entity in order to put as good a face as possible in front of the shareholders and the public. It is suggested that countries which have to fall back on the legal entity as the statistical unit should make an attempt to eliminate the effects of window dressing and should comment in notes to the balance sheets on the extent to which the choice of statistical unit has affected international comparability. Such is the possibility of distortion arising from the use of the legal entity as the statistical unit that an estimated balance sheet compiled on the basis of families is usually preferable to a mechanical adding together of the individual balance sheets of legal entities.

3.7 It was stated above that this question of the correct statistical unit for corporate and quasi-corporate enterprises applies particularly to the balance sheet, but it would seem on the face of it that the statistical unit for the capital finance account must be identical with that for the balance sheet and revaluation account. In practical terms this is not necessarily so. For a large number of entries on the capital finance account the adding together of entries for legal entities produces the same answer for the

institutional sector as proceeding from figures for families; this is so, for example, for fixed capital formation, increase in stocks and transactions in financial claims issued by transactors outside the family. The only trouble could arise with transactions between members of the family in financial claims issued by one of them, but it is rather unlikely that details of these will be available in any case.

b. Trust property

3.8 A very large part of wealth in advanced societies comes under the control of trustees, and this produces certain problems which should be considered in the context of the statistical unit. In the household sector there are many personal trusts, property which is administered by trustees, either groups of individuals or corporate bodies, and which cannot be disposed of by those persons who receive the benefit of the income from the property, the life tenants. Although trust property is not owned outright by any individual until the termination of the trust, when it reverts to a named individual, the remainderman, it is properly included as a part of the wealth of households. Apart from personal trusts, many other forms of property are under the control of trustees. In many cases, such as those arising in mutual organizations like trade unions, friendly societies and some pension funds, the trustees have only the function of ensuring that the elected or appointed officials follow the rules of the organization in any dealings with its property; there is no difficulty in attributing the property to the organization concerned. There remains, however, a large class of trusts established for educational, religious or charitable purposes, and their existence leads us to extend the definition of the statistical unit within the sector of private non-profit institutions serving households given in the published guidelines in respect of the SNA. There are three cases:
(i) when the trust has its own trustees and operates independently of other trusts, the statistical unit is the trust;
(ii) it is common for educational, religious or other bodies to be trustees for a number of different trusts - a college acting as trustee for a number of scholarship funds or a religious body acting as trustee for a number of

charitable funds, for example. As long as the trustee is itself a non-profit institution, the appropriate statistical unit is the non-profit institution and any trusts for which it is acting as trustee;
(iii) when the trustee is not itself a non-profit institution but a body in another sector, such as a local authority, the government or a corporate enterprise (other than a specialised corporate trustee), the appropriate statistical unit is the group of trusts under one trusteeship.
No links should be shown between the group of trusts and the body acting as trustee, since trusteeship carries no rights of ownership. The need for grouping individual trusts in the way suggested is all the greater because it is now common practice for bodies to combine the investments of all trusts under their trusteeship into a common pool, and to allocate each trust a proportionate interest in the amalgamated fund.

2. General government

3.9 In paragraph 5.68 of A System of National Accounts[7/] it was laid down that the capital finance account of general government should be consolidated so as to portray only transactions between general government and the rest of the economy. This decision was reached because it was felt that the financial decisions of state, provincial and local governments were in fact often controlled by, or concerted with, the central government. While it is true in most countries that capital expenditure decisions of lower echelons of general government are made centrally, they are often left with a choice, more or less circumscribed in different cases, between raising the finance through an agency of central government or on the open market. It would seem best to relax the requirement of consolidation imposed in the aforementioned paragraph so that countries may combine the capital finance accounts and hence the revaluation accounts and balance sheets of all units of general government which have a measure of financial independence. The financial links between central government and other units which will appear on the balance sheet will come mainly under the heading of loans, both short-term and long-term. This suggestion would ensure parity of treatment with those

---

7/ Op. cit.

cases in which the loans by central government are made through an agency which is regarded as a public financial institution.

B. Classification of assets and liabilities

3.10 The scheme of classification of assets and liabilities in A System of National Accounts[8] divides them into the main groups set out below.

Non-financial assets

Reproducible tangible assets

Fixed assets

Stocks

Non-reproducible tangible assets

Non-financial intangible assets

Financial assets and liabilities

The necessary classifications and definitions have been largely covered in the aforementioned publication in the case of reproducible tangible assets, but the discussion of non-reproducible tangible assets and of non-financial tangible assets has been far less complete. The classification and definitions for financial assets and liabilities given in chapter VII of the publication, when considering capital finance accounts, can be taken over with only one slight change of wording.

3.11 Before we consider the detailed schemes of classification it is necessary to examine the conceptual basis of balance sheets with some care in order to determine what should be included in balance sheets and what should be excluded. This is necessary because, judging from the published work on the subject, many entries are proposed for balance sheets which nobody would consider in the context of capital finance accounts.

1. Entries in balance sheets

a. Individual and collective wealth

3.12 The balance sheets of institutional sectors are the result of combining the balance sheets of individual transactor units within the sector. Sectors and sub-sectors are only statistical abstractions, and they cannot themselves own wealth or have liabilities. It follows that the only assets and liabili-

8/ Op. cit.

ties which may be included in the balance sheets are those which can be attributed to individual transactor units. This feature of the balance sheets of institutional sectors rules out any possibility of including collective wealth, wealth which might be attributed to the whole group of transactor units comprising the institutional sector but not to individual transactor units within it. Many workers on balance sheets have proposed entries which fail this test, and we must look briefly at the nature of the various entries which have been proposed.

3.13 Most of the entries proposed consist of the transfer of the net worth of mutual organizations to the household sector, and take the form of "equity in mutual financial organizations" and "equity in private non-profit institutions serving households". This latter entry would fail the test completely, because there is no means whereby shares in the equity of private non-profit institutions can be attributed to individual households, and hence no means whereby parts of this collective equity can figure in the balance sheets of individual households. In the case of mutual financial organizations, the only claims which can be attributed to individual households are those consisting of life insurance policies or pension claims; the remainder of the net worth of these organizations is not attributable to individual households. No entry for wealth owned collectively should appear in the balance sheets of institutional sectors, and those parts of the net worth of an organization which cannot be attributed to individual transactor units must remain as the net worth of the organization concerned.

3.14 The type of entry considered in the previous paragraph is different in kind from the two transfers of equity which figure in the system proposed here. These are "net equity of households on life insurance reserves and on pension funds" and "net equity in quasi-corporate enterprises". In both of these cases the share of each individual transactor unit in the total equity is clearly determinable.

b. The nature of assets and liabilities

3.15 The first criterion which an entry must satisfy before it can be passed for inclusion in the balance sheets of this system is thus that it

must be attributable to an individual transactor unit, but this is not sufficient. This criterion could be satisfied by including everything which normal accounting practice regards as acceptable. As a rule of thumb this is a fairly good guide, but it can lead us astray. It is therefore best to establish further criteria.

3.16 The next criterion is that the entry must be capable of being valued with certainty in the balance sheet of the individual transactor unit. This criterion leads us to reject one whole category of entries accepted by normal accounting practice, that coming under the heading of "provisions". In accounting practice provisions are sums set aside to provide for future liabilities, both certain and contingent, whose magnitude is not known. Examples of items that are commonly included are "provisions for future taxation" when the amount due has not yet been established, "provisions for pension liabilities" when these have not been determined actuarially and "provisions for bad and doubtful debts". Provisions are thus to be distinguished from liabilities which are certain in value. In some of the cases mentioned it is possible for the statistician to estimate the sums actually involved and to insert these into the balance sheet.

3.17 The treatment of the various items coming under the heading of "net equity of households on life insurance reserves and on pension funds" illustrates further aspects of the criterion of certainty of valuation. Life insurance policies represent a claim to the future payment of a capital sum and/or income on the occurrence of either of two events, death or the prior attaining of a specified age. One or other of these two events is certain to occur, and it is possible to establish with certainty the present value of a claim to the future payment of a capital sum or of income.

3.18 Life insurance and pension schemes can be contrasted with casualty insurance, in which payment is contingent on an occurrence which is not certain to happen to any individual transactor unit. No asset is created, and the only entries in balance sheets should be those which are necessary to account for unexpired premiums and unexpired risks (see paragraph 3.35). This principle can be extended to cover other contingent liabilities and their equivalent assets. The commonest case arises with banks, which often

have contingent liabilities arising out of payments by customers to third parties which they have guaranteed. Generally banks enter their contingent liability on acceptances, endorsements, guarantees and bills discounted, and enter an asset either of the same amount or of the amount reduced by a provision for the extent to which they will be called on to honour their guarantees. Such contingent liabilities have no place in the system of institutional sector balance sheets. If a note of the amount is regarded as necessary to portray the full position of banks, it should be given as a memorandum entry.

c. Non-financial intangible assets

3.19 Normal accounting practice is not a good guide for deciding which items coming under the general heading of "non-financial intangible assets" should be included in balance sheets. As it has been developed so far, the system provides for the sale between institutional sectors (including for this purpose the rest of the world) of intangible assets which represent the exclusive rights arising out of patents, trade marks, copyrights and leases of land and buildings, mineral deposits, hunting grounds and fishing grounds. Leases have a value only when they are for a period greater than one year and when they are assignable. The argument is developed in paragraphs 4.22 through 4.29, that in these cases the value of the lease is in fact part of the total value of the land and buildings or the subsoil asset, and hence that it would be double-counting to include the values of both leases and of land, buildings and subsoil assets in balance sheets. For this reason no categories are provided in our scheme of classification for leases of any kind under non-financial intangible assets, although it is apparently necessary that they should still figure in the capital finance account. The present scheme provides no solution to this disparity of treatment between the capital finance account on one hand and the revaluation account and balance sheet on the other; it is left as a matter for discussion.

3.20 Some accountants capitalise expenditures on research and development and on promotion and include these in balance sheets. These items have been rejected in the SNA on the grounds that the expenditures may not yield concrete

benefits. Our treatment in balance sheets follows that of the transaction accounts. Similarly the system does not treat expenditure on education and health as capital formation, and hence we exclude a valuation of human capital from the balance sheets. Once agreement has been reached among economists on the ways in which a meaningful valuation of human capital may be made, this will be a strong candidate for inclusion in any revision of the system.

3.21 There is one last intangible asset which figures prominently in conventional accounts of enterprises, but which we must reject completely. This is the entry described as "goodwill". Basically this is an item used to patch up the deficiencies of conventional accounting in terms of historic cost. For example, when one company takes over another, the difference between the cost of acquisition of the company taken over and the book value of its net assets as incorporated into the balance sheet of the merged enterprise is entered as goodwill. Once items in balance sheets have been valued at current prices, this particular item automatically disappears. Goodwill also often figures in the balance sheets of unincorporated or quasi-corporate enterprises. It has the same function of indicating that the total value of the whole enterprise is greater than the sum of the conventional accounting values of the various assets and liabilities, but in this case a large part of the difference may be attributed to the personal qualities of the proprietors of the enterprise. It is, in fact, a partial attempt to value human capital, and it must be rejected on those grounds.

2. Classification of non-financial assets

3.22 Now that the various conceptual points have been dealt with, we can consider the detailed classification schemes, beginning with that for non-financial assets. The items to be included under this heading have one thing in common, the fact that they are assets without a corresponding liability. They appear on one balance sheet, that of the transactor unit which owns them. The classification and definitions are given in table 3.1 below. These follow very closely those already given in various parts of the system dealt with earlier, particularly the capital finance accounts, and

the only changes made have been slight extensions to cover points not fully dealt with in the earlier schemes. There are only two points which appear to call for special comments: (i) the difficulties of separating the entries under land from those under buildings and (ii) the inclusion of consumer and military durables.

Table 3.1 Classification of non-financial assets according to type

10. Reproducible tangible assets
- 10.1 Fixed assets
  (References in brackets are to items of table 6.3 of A System of National Accounts, which gives the necessary definitions.)
  - 10.1.1 Residential buildings (item 1)
  - 10.1.2 Non-residential buildings (item 2)
  - 10.1.3 Other construction works except land improvements (item 3)
  - 10.1.4 Transport equipment (item 5)
  - 10.1.5 Machinery and equipment
    - 10.1.5.1 Agricultural machinery and equipment (item 6.1)
    - 10.1.5.2 Other (item 6.2)
  - 10.1.6 Livestock (item 7)
- 10.2 Stocks
  (Classified as in table 6.2 of A System of National Accounts)
- 10.3 Consumer durables
  (Reference in brackets are to items of table 6.1 of A System of National Accounts, which gives the necessary definitions.)
  - 10.3.1 Furniture, fixtures, etc. (item 4.1.1)
  - 10.3.2 Major household appliances (item 4.3.1)
  - 10.3.3 Personal transport equipment (item 6.1)
  - 10.3.4 Other (items 5.2, 7.1.1 and 7.1.2)
- 10.4 Military durables

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 10.1.1 through 10.1.3 above. In the case of residential buildings it is necessary to impose a limit to the size of private garden surrounding a dwelling; if no limit is prescribed for local taxation purposes, any excess of garden land over 0.5 hectares should be included under item 11.1.3 below.

Table 3.1 (Continued) Classification of non-financial assets according to type

		11.1.2	Cultivated land Land on which agricultural or horticultural activities are carried on for subsistence or on a commercial basis; land underlying forests and plantations. Included is land forming part of a farming enterprise, access roads, farmyards, etc., but not farm buildings and dwellings. Private gardens and plots not cultivated for subsistence or on a commercial basis should be classified to item 11.1.3, except that a limited area surrounding dwellings should be classified to item 11.1.1.
		11.1.3	Other Amenity land, parklands and pleasure grounds; private gardens and plots not cultivated for subsistence or on a commercial basis and the excess area above a certain limit of private gardens surrounding residential buildings. Land on which there are communal rights of grazing but of which the main use is for amenity should be included.
	11.2		Forests and plantations
		11.2.1	Timber All timber having a commercial value in forests, timber tracts, woodlands and copses. Land underlying the timber is classified to item 11.1.2.
		11.2.2	Plantations, orchards and vineyards All holdings of fruit-bearing and sap-bearing plants which take more than a year to become productive. Land underlying the plantations, orchards and vineyards is classified to item 11.1.2.
	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		Water installations and fisheries
		11.4.1	Irrigation and flood control projects Dams, dikes and other installations connected with irrigation and flood control projects
		11.4.2	Fisheries Stocks of fish, etc., in fish ponds and farms, cultivated oyster and pearl beds and other fisheries. Only those fisheries in inland waters (rivers and lakes) and inshore fisheries separated from the open sea by a barrier should be included.
12.			Non-financial intangible assets
	12.1		Patents, trademarks and copyrights Includes both exclusive rights owned by the exploiting transactor and those exploited by a transactor other than the owner, subject to a royalty payment. Licences to exploit "know-how" are included, but the right to receive

Table 3.1. (Continued) Classification of non-financial assets according to type

	fees for managerial or technical services does not constitute an intangible asset.
12.2	Other Non-financial intangible assets n.e.c.

NOTES

1. Although they are by definition non-reproducible, historic monuments (buildings listed by the relevant authorities as of archaeological or historical interest, public statues, etc.) are classified to whichever of items 10.1.1 through 10.1.3 is relevant.

2. The following items, which are mainly non-reproducible, are classified as consumer durables (item 10.3) when owned by households and, like other consumer durables, as other machinery and equipment (item 10.1.5.2) when owned by enterprises, government or private non-profit institutions. When owned by households they fall into the following sub-items:

i. Works of art; antique furniture and carpets (articles of an age exceeding 100 years) - item 10.3.1.

ii. Articles made of precious or semi-precious materials and jewellry (whether antique or not); collection of postage stamps, coins or any articles of historic or scientific interest other than furniture and carpets - item 10.3.4.

a. Land and buildings

3.23 The ownership of real estate is most complex, and in many countries the provision of separate entries under land and buildings for institutional sector ownership of real estate will prove one of the most difficult tasks in compiling balance sheets. This has already been recognised in the consideration of capital finance accounts, where it was suggested that in cases of difficulty sales of land and buildings should be lumped together (see paragraph 6.128 of A System of National Accounts[9/]). The difficulties arise from two main factors: (i) the market in real estate and the accounting documents of transactor units do not normally distinguish the value of

9/ Op. cit.

land from that of the buildings erected on it and (ii) the ownership of real estate often involves a large number of transactor units, each of which has a separate interest in the total value of the land and the building. It is because it is often impossible to separate out the parts of each interest attributable respectively to site and to structure, even on the conceptual level, that both the market in real estate and the accounting documents of transactor units make no distinction between the two elements.

3.24 A generalised solution is offered in paragraphs 4.22 through 4.29 to the problems of separating the value of land from that of the buildings erected on it. For the global valuation of land underlying buildings, the use of site/structure ratios is suggested; the resulting figures may not be particularly accurate, but there is no real difficulty. For the valuation of the ownership by institutional sectors of land and buildings, the solution suggested depends on the availability of separate figures for rents paid and received in respect of land or buildings. This separation of rent figures is called for in the transaction accounts of the SNA, but to the extent that it cannot be achieved there, it will be impossible to provide by this method balance sheet figures for the institutional sector ownership of real estate which distinguish the land element from that of buildings. However, the separation is one that is required mainly at the level of global valuation for the purpose of analysing the structure of national wealth, and figures for institutional sector ownership of land and buildings combined or only a partial separation would not be disastrous.

b. Consumer durables and military durables

3.25 Although the classification of reproducible tangible assets is based on the classification of expenditure which counts as gross fixed capital formation, an exception is proposed in the case of consumer and military durables. For consumer durables, the case rests mainly on the need to have figures for the stock of consumer durables in the balance sheets incorporated into models of personal saving and household financial behaviour. The behaviour of households is based on the fact that consumer durables do in fact yield their services over a period longer than a year (the criterion

adopted elsewhere in the system to distinguish capital formation from consumption expenditure), and figures for the depreciated value of the stock of consumer durables are essential in any model that seeks to explain this behaviour.

3.26 There is no similar pressing need for the inclusion of military durables. The difficulties of estimating the useful lives of military durables in the face of rapid obsolescence are well known, but Goldsmith (3) was able to make estimates of the value of the stock for the U.S.A. The case for considering the inclusion of this item is that, if military durables are valued on the same basis as producer durables, they represent for many countries as much as 10 per cent of the value of the stock of reproducible tangible assets. The item is included in the list without subdivision pending further discussion.

3. Classification of financial assets and liabilities

3.27 Table 7.2 of A System of National Accounts[10/] was designed to be suitable as a classification of the holdings of financial claims, in addition to classifying financial claims in capital finance accounts. There is only one item which needs any amendment; this is identifying the balance-sheet counterpart of "proprietors' net additions to the accumulation of quasi-corporate enterprises" (item 8.10 or 9.10 of the classification) as 'net equity in quasi-corporate enterprises'.

a. Net equity in quasi-corporate enterprises

3.28 The concept is not changed in any way by this change of wording. It should be noted that the equity of the proprietors of quasi-corporate enterprises is not necessarily equal to the total net worth of the enterprise. In many partnerships the rights of the individual partners to withdraw funds from the enterprise are strictly circumscribed. In these cases the equity of the partners is limited to the sum of the amounts to which individual partners may lay claim, and any residual net worth remains as the net worth of the enterprise.

10/ Op. cit.

b. The total of corporate equities and other securities

3.29 The problem considered in paragraphs 3.5 through 3.7 above of the statistical unit for corporate enterprises raises the question of which corporate equities in issue are to be shown in balance sheets and which are to be consolidated out. The basic principle to be applied comes from the definition of the statistical unit; all financial links within a statistical unit are consolidated out, and all those between statistical units are shown. The treatment proposed for subsidiary enterprises operating in different sectors from that of the parent is consistent with this principle, because it involves treating the subsidiary entity as a separate statistical unit and thus showing equity securities issued by the subsidiary and held by the parent. This principle does not quite cover the problem, however, because not all subsidiary enterprises are owned outright by their parents. When a subsidiary enterprise is part of the same statistical unit as the parent company, it will be necessary to show the value of the corporate equities attributable to holders other than the parent company (minority interests) but to consolidate out those corporate equities of the subsidiary which are owned by the parent company. Those corporate equities to be included in balance sheets and revaluation accounts are thus of two sorts: (i) the corporate equities of all independent statistical units and (ii) the corporate equities of subsidiary enterprises which are owned by minority interests. It follows that the taking over of a hitherto independent company and the purchase by a parent company of shares owned by minority interests will both bring about a diminution in the total of corporate equities shown in the balance sheets of institutional sectors (see paragraph 3.48).

3.30 The general principle that balance sheets should show only financial links between independent statistical units covers nearly all other cases, and there is only one problem that needs brief mention. In many countries transactors units habitually trade on the market in securities which have been previously issued by them. When the securities are purchased in order to redeem them, there is no problem, but in some cases the securities which

have been bought may be sold again on the market. Examples would be governments trading in their own bonds in order to ensure orderly markets or to control interest rates; or, in some countries, companies trading in their own corporate equities. In these cases it is suggested that the totals of securities should be shown gross, with an asset on the issuing transactor's balance sheet to show the value of its own securities which it has bought on the market but not yet redeemed.

c. Net equity of households on life insurance reserves and on pension funds

3.31 The definition adopted for the net equity of households on life insurance reserves and on pension funds covers all life insurance business and all pension claims on fully funded schemes, whether these are managed by life insurance companies (included under life insurance reserves) or are independent. There is, however, a strong case for including claims on unfunded pension schemes and pension and death claims on social security funds. The treatment adopted in the transaction accounts of the SNA does not allow imputed contributions to unfunded pension schemes to rank as saving of households, and contributions to social security funds are regarded as direct taxes. To the economist there are good reasons for regarding both as saving, since households which are certain to benefit from unfunded pension schemes and from retirement pensions or death payments from social security funds will take this into account in determining their saving behaviour; they will be able to save that much less than beneficiaries of funded schemes and yet be as well off. Even if the argument is not accepted in its application to the transaction accounts, there remains sound reason for including the net equity of households on unfunded pension schemes and on social security funds in the balance sheets of households. Some idea of the importance of the point can be gleaned from the fact that in Britain the actuarial value of the unfunded pension liabilities of the central government alone for its own employees is actually greater than the actuarial value of the pension liabilities of all independent pension funds (see Revell [5], pp. 259 and 431)). When social security funds provide only small flat-rate pensions and death benefits, the case for their inclusion is not so pressing, but

increasingly in many countries the state is contracting to provide earnings-related pensions equivalent to 50 or 60 per cent of final salary; in these cases the state liability could soon outweigh that of independent schemes, and there would be a considerable distortion of the balance sheets of households if the claims on the state scheme were omitted. The actuarial liabilities may not be easy to compute, but with such large sums at stake rough estimates are preferable to complete omission.

3.32 The entries which would be necessary on balance sheets could be accomplished by extending the definition of net equity of households on life insurance reserves and on pension funds to include also claims on unfunded schemes and on social security funds. Households would show an asset equal to the value of net equity under the extended definition, the various institutional sectors would have a liability equal to the actuarial value of their pension liabilities in respect of their employees and general government would have a liability in respect of the social security funds. It is quite possible to include these assets and liabilities on the balance sheet without making any entry for transactions in the capital finance account, since changes from year to year in the actuarial value of future pensions could be treated simply as a revaluation.

3.33 There is one further minor point in connection with life insurance. In some countries insurance companies issue capital redemption or sinking fund policies. These are used to provide for the amortization of leases and loans. The transactor makes a fixed periodic payment to an insurance company instead of setting up his own sinking fund. The payments on the maturity of these policies do not depend in any way on the laws of mortality, and so strictly they do not form part of the life insurance; equally they are not casualty insurance, because the contracts are long term and the payments are not contingent but fixed and certain. The policies have a surrender value. Since this type of business is usually very small in total, the policies are best treated in practice as part of life insurance.

d. Other accounts receivable and payable

3.34 The definition given in table 7.2 of A System of National Accounts[11/] of accounts receivable and payable other than trade credit and advances is comprehensive, but most items are to be recorded on a "due to be paid" basis, and not on an "accruals" basis. The reasoning behind this decision is that the computation of accruals would present considerable difficulties. This is true in making estimates in respect of flows, such as rent, interest, service charges in respect of casualty insurance, or in analyzing the category "other accounts receivable and payable" according to type. However, in compiling balance sheets, it will often be necessary to derive totals in respect of accounts receivable and payable from the balance sheets of transactor units; and normal accounting practice is to present figures on an "accruals" basis. The global figure for accounts receivable and payable given in published balance sheets will include all payments in advance for the unexpired portion of rents, casualty insurance premiums and similar items and for accrued interest receivable, etc. It would therefore be easier if, for purposes of compiling balance sheets, the definition of accounts receivable and payable were to be aligned with this normal accounting practice.

3.35 Two particular examples may be given. If one were to account separately under each institutional sector for unexpired casualty insurance premiums, as an asset the task would be formidable, but all the necessary calculations will be included in the global figure for accounts receivable in transactors' published balance sheets. Likewise casualty insurers show an equivalent liability for unexpired risks or for technical reserves for premiums for a future accounting period under accounts payable; both might be treated as accounts payable in the balance sheet. Similarly, accrued interest receivable and payable will be recorded by transactors either separately or in their global figure for accounts receivable and payable; the only complication arises where this is included in the market price (see paragraph 3.38). Only dividends on corporate equity would need to be recorded on a "due to be paid" basis, because the amount is known until some time after the end of the accounting period.

11/ Op. cit.

C. Classification of revaluations

1. The dual nature of revaluations

3.36 The word revaluations conjures up a picture of accounts devoted entirely to entries arising out of changes in market prices or in replacement cost. It is indeed the main function of revaluation accounts to portray the effects of price changes, but they also have the function of accounting for all differences between the opening and closing assets and liabilities on balance sheets which are not covered on the capital finance accounts. Revaluations can be divided into the following three categories: (i) revaluations due to price changes; (ii) adjustments; (iii) other increases in value. The nature of the second category, which is intermediate between the other two, will be explained when we consider the detailed classification below (see paragraphs 3.45 and 3.46).

3.37 Revaluations can also be considered from the point of view of their relationship to entries in the capital finance accounts. There are only two accounts coming between opening and closing balance sheets, the capital finance account and the revaluation account, and it follows that all differences between the values of each class of assets and liabilities on the opening and closing balance sheets must be covered on one or the other account. The differences in value between succeeding balance sheets can be decomposed into the two elements of price changes and changes due to the coming into existence ("birth") and the passing out of existence ("death") of assets and liabilities. Price changes are all shown in the revaluation accounts, but these must also accommodate all births and deaths which are not covered in the capital finance accounts.

3.38 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); in the last case, gross fixed capital formation provides for birth and death is accomplished by means of capital consumption once the item has reached its estimated life span. Gross fixed capital formation also includes certain entries which relate to initial expenditures only, which no depreciation charged against

the assets. In the case of improvements to land subsequent increases to the value of the land come only from price changes, but the remaining cases involve either living creatures or plants, of which the value can in addition increase from natural growth. The capital finance accounts provide for the birth of non-financial intangible assets only by purchase from the rest of the world, and any indigenous births and deaths must be covered in the revaluation accounts. There are two cases in which transactions affecting assets to be included in balance sheets are carried out in the income and outlay account instead of in the capital finance account; and in order to account for changes between opening and closing balance sheets, it is essential to repeat the transactions on the revaluation account. The two cases are expenditure on consumer durables and expenditure on military durables (both treated as final consumption expenditure); in both cases depreciation must be allowed for.

2. The detailed classification

3.39 Revaluations are classified according to their cause in table 3.2, the three major categories being those set out in paragraph 3.36 above. Table 3.2 should be read in conjunction with table 3.3, which relates the various causes of revaluation to the types of asset and liability affected, and which shows how this relationship depends on the nature of the entry in the capital finance accounts. We shall begin by commenting on the main entries in each of the three major divisions of table 3.2

Table 3.2. Classification of revaluations 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
- 13.1.5 Transfers to net equity of households on life insurance reserves and on pension funds

Table 3.2. Classification of revaluations according to cause (cont)

13.2	Adjustments
13.2.1	Accumulated depreciation in light of current replacement cost
13.2.2	Unforeseen obsolescence
13.2.3	Differences between allowances included in capital consumption for normal damage to fixed assets and actual losses
13.2.4	Other
13.3	Other net increases in value
13.3.1	Natural growth less depletions
13.3.1.1	Livestock
13.3.1.2	Forests and plantations
13.3.1.3	Fisheries
13.3.2	New finds less depletions of subsoil assets
13.3.3	Household expenditure on consumer durables less depreciation
13.3.4	Government expenditure on military durables less depreciation
13.3.5	Net increase in non-financial intangible assets other than by net purchases from the rest of the world or other institutional sectors
13.3.6	Cancellation of corporate equity securities on consolidation

Table 3.3 Analysis of revaluations 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	Revaluations (item numbers from table 3.2)
Non-financial assets	(Item numbers from table 3.1)	
Gross fixed capital formation less consumption of fixed capital	Reproducible tangible assets 10.1.1 through 10.1.5	13.1.2, 13.2.1 through 13.2.3
Gross fixed capital formation for initial outlays	Livestock 10.1.6	13.1.1, 13.1.3, 13.3.1.1
	Land improvements (11.1)	13.1.1 13.1.3
	Forests and plantations (11.2)	13.3.1.2

Table 3.3.(continued) Analysis of revaluations 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	Revaluations (item numbers from table 3.2)
	Dams and dikes (11.4.1)	13.1.1,13.1.3
	Fisheries (11.4.2)	13.1.1,13.1.3, 13.3.1.3
Net purchases of land	Land (11.1)	13.1.1
Increase in stocks	Stocks (10.2)	13.1.1
Net purchases from the rest of the world and other institutional sectors	Non-financial intangible assets (12)	13.1.1,13.1.3, 13.3.5
No entry	Consumer durables (10.3)	13.1.2,13.2.1 through 13.2.3, 13.3.3
	Military durables (10.4)	13.1.2,13.2.1 through 13.2.3, 13.3.4
	Subsoil assets (11.3)	13.1.1,13.1.3, 13.3.2
Financial assets and liabilities	(Item numbers from table 7.2 in A System of National Accounts)	
Net acquisition of financial assets; net incurrence of liabilities	Corporate equity securities,including capital participations (8.6 or 9.6)	13.1.1, 13.3.6
	Net equity of households on life insurance reserves and on pension funds (8.9 or 9.9)	13.1.5
	Net equity in quasi-corporate enterprises (8.10 or 9.10)	13.1.3,13.1.4
	Claims issued by non-residents	13.1.1,13.1.4
	All other claims carried at market value	13.1.1

a. Revaluations due to price changes

3.40 The first three sub-categories 13.1.1 through 13.1.3 are distinguished because of the different methods of valuation employed in balance sheets. Changes in market prices and replacement costs account for valuation changes in items carried at market value and at depreciated replacement cost, respectively. These two items cover the bulk of the entries. Some balance sheet items, however, will have to be valued either by discounting future sums to compute present values or by capitalizing current income streams, and either the rate of discount or the capitalization factor may vary in addition to changes in market prices.

3.41 Item 13.1.4 refers to a price change of a special sort, the change in the price of one currency in terms of another. In most cases only changes in official parities will be considered under this heading. A special case arises where part of the foreign exchange market is segregated, a situation which occurs particularly when exchange control regulations forbid the acquisition of foreign securities or direct investment assets except through a pool of currency fed by prior sales of equivalent assets owned by residents. The normal accounting treatment of the premium (or occasionally discount) on this "investment" currency varies, and the basis of conversion for items expressed in foreign currencies is not always explicitly stated in published accounting documents. The correct procedure is to value the appropriate assets in the "investment" currency rate on the balance sheet date, with the revaluation entries following from this treatment.

3.42 Entries under item 13.1.4 affect only overseas assets owned by residents (outward portfolio or direct investment); the inward items of portfolio or direct investment are not affected by currency revaluations since they are expressed in the national currency of the reporting country. The revaluation arising from changes in currency rates will normally be additional to that arising from the market price or replacement cost of the assets. In the case of securities issued by non-residents and quoted on the stock exchanges of the reporting country, the stock exchange prices reflect both currency changes and normal market price changes. If it is desired to

present a complete analysis of revaluations by cause, the two elements in the price change must be disentangled.

3.43 The transfers to net equity of households on life insurance reserves (13.1.5) can be included under the general heading of revaluations due to changes in prices because they are made possible by unrealized capital gains on the assets held against the life fund. Life funds normally hold reserves in addition to their liabilities to policyholders, shareholders and third parties; these reserves represent the excess of the balance sheet values of assets over liabilities to policyholders, shareholders and third parties. In addition any excess of the total market value of assets over the total value at which they are carried in the balance sheet is notionally balanced by a "hidden reserve" on the liabilities side of the balance sheet. Particularly when the excess of total market value over total balance sheet value is large, life insurance companies often transfer that part of the excess which they regard as permanent (in the sense that it is unlikely to be reversed in the foreseeable future) to policyholders through the profit and loss account. This is a form of revaluation of the equity of households on life insurance reserves which is not accounted for elsewhere in the system. The need for a revaluation entry arises only when the unrealised capital gain is distributed to policyholders in the form of a reversionary bonus, payable only on the maturity of the policy; cash bonuses distributed to policyholders do not occasion a revaluation entry of any sort. For technical reasons it is common for part of the transfer to policyholders to take the form of a "terminal"bonus, payable on all policies maturing within a specified period. To the extent that the bonuses are payable on death claims, this form of bonus causes a conceptual difficulty, because no member of the households can foresee the date of his death with certainty. The difficulty is best ignored in practice.

3.44 The treatment of net equity of households on pension funds described in paragraph 7.98 of A System of National Accounts[12/] implies the immediate and automatic transfer to the net equity of households of any unrealised

---

12/ Op. cit.

capital gains (losses) in the fund's assets. This difference of treatment between life insurance companies and pension funds is presumably based on a supposed difference in accounting practices between the two types of body, but it is doubtful whether this difference in practices obtains in most cases. Most pension funds show on the liabilities side of their balance sheets a figure for the "fund" which does not differ in concept from that shown in the balance sheets of life insurance companies. Any excess of the total balance sheet value of assets over the value of the fund and of liabilities to third parties is shown as reserves not attributable to individual members of the pension fund; and "hidden reserves" are possible as for life insurance companies when the total market value of the assets exceeds the total balance sheet value. The treatment proposed in the aforementioned paragraph would result in pension claims being valued without the addition of unrealised capital gains (losses) on assets when the persons were in pension schemes operated by life insurance companies, and with the addition of unrealised capital gains (losses) when they were in independently-funded pension schemes. This dichotomy is ill-advised in principle. It is suggested below (paragraph 4.49) that the net equity of households on pension funds should be valued from the figure for the "fund", and the acceptance of this would entail an identical treatment of revaluations on pension funds and on life insurance reserves.[13/]

b. Adjustments

3.45 The first three of the items under this category all refer to adjustments needed when assets are being valued at depreciated replacement cost by means of a perpetual inventory. The first (13.2.1) is the adjustment to accumulated depreciation arising from price changes in the current year, and the other two (13.2.2 and 13.2.3) are adjustments because assumptions made in the perpetual inventory calculation have been proved incorrect by the actual happenings of the period.

13/ It should be noted that paragraphs 7.95 through 7.98 of A System of National Accounts refer to two different sorts of capital gains (or losses). The first is the difference between expected claims (on which premium rates are based) and actual claims; these do not concern us in the revaluation accounts. The second sort consists of unrealised capital gains (losses) to which we are referring in paragraphs 3.43 and 3.44.

3.46 Item 13.2.4 "other" has two functions. There is firstly the general function of accommodating all revaluations which cannot be put under any of the other headings, but there is also a particular use, arising out of the methods of compiling balance sheets for recent years which will be suggested in the chapter to be added to the next version of this paper. This method involves estimating recent balance sheets by adding transactions to a fairly firm figure for the past, and estimating revaluations from price index series. If this suggestion is adopted, revisions will be necessary when the figures of the actual market values of assets and liabilities are available. The entry under this heading in the revaluation account will thus include adjustments arising out of differences between estimated and actual revaluations.

c. Other net increases in value

3.47 Category 13.3 consists of all those changes in value between opening and closing balance sheets which are not covered elsewhere in the system. Item 13.3.1 allows for the fact that the value of livestock, forestries and plantations and fish increases from natural growth in addition to the increase in value created by capital formation. Items 13.3.2 through 13.3.5 cover various types of creation of assets which are not included in the capital finance accounts, and item 13.3.6 is an isolated example of an accounting entry that extinguishes a financial claim.

3.48 In considering the total of corporate equities to be shown in balance sheets, it was pointed out in paragraph 3.29 above that the acquisition of a hitherto independent company by another and the acquisition of minority interests in subsidiary companies both resulted in a diminution in the amount of corporate equity securities shown in institutional sector balance sheets and of the total in issue. The capital finance account will show the purchase of equity securities, and item 13.3.6 covers the negative entry in the revaluation account necessary to cancel the securities. This entry is, of course, necessary only when the newly-acquired subsidiary is to be consolidated into the family; it is not applicable when the subsidiary is resident overseas or is in a different institutional sector from the acquiring company.

3.49 It will be noted that there is no entry covering land as such in this category. This is not because the supply of land is regarded as fixed and immutable, but because no entry in addition to that under price changes is necessary. If we take it that wasteland (desert, mountain areas not suitable for grazing and so on) has zero value, then it is necessary to provide for the up-grading of land from the category of wasteland to that of valuable land. This is done in two ways. Improvements to land count as part of capital formation, and the initial entry comes through the capital finance accounts. Any appreciations in value beyond the cost of the improvements must count as being due to the change in the market price of the improved land. The capital formation entry occurs only in the year in which it was incurred; and any subsequent changes are taken care of by price changes. Land can also enter the stock of valuable land through the operation of market forces, without any improvements being made to it - the bringing into cultivation of marginal land because of the increased price of crops, for example. This particular extension of the area of valuable land is treated as due solely to price change.

3.50 Although the separation of revaluations due to price changes from those arising from other causes is quite clear conceptually, there may be some difficulty in practice in disentangling the two elements in the revaluation of particular assets and liabilities. This will be so especially when revaluations are estimated as a residual from differences between opening and closing balance sheets and identified transactions. These difficulties will not arise with items 13.3.3 and 13.3.4 because the flows of expenditure are already estimated, but they will occur on all the other items of category 13.3, and will be particularly acute on item 13.3.5, the net increase in non-financial intangible assets other than by purchase from the rest of the world. Not much information is needed, however, to make the distinction in most cases. A homely example will illustrate the disentangling of the two elements. If a two-year-old cow had a market value of 8 in year 0, and if a three-year-old cow had a market value of 11 in year 0 and a market value of 13 in year 1, then the revaluation due to natural growth (ignoring any capital formation during the year) is 11 - 8 = 3, and the revaluation due to price change is 13 - 11 = 2.

CHAPTER IV VALUATION

4.1 The problem of valuation is the feature which distinguishes balance sheets from the other accounts of the system. In the transaction accounts most of the entries can be taken from the records of private accounting without revaluation. The only two exceptions are the measurement of stock appreciation and the computation of capital consumption on a replacement cost basis. In both of these cases adjustment is necessary because the valuation in the balance sheets of private accounting is deficient. In the balance sheets of the national accounts on the other hand, many of the figures obtained from primary sources must be revalued before they can be used. This feature of balance sheets is emphasized by the fact that a revaluation account is needed in addition to the capital finance account to bridge the gap between entries in opening and closing balance sheets.

4.2 The general basis for the valuation of entries in the balance sheet has been laid down in paragraph 2.87 of A System of National Accounts[14/] as current market price, with most tangible fixed assets carried at replacement cost. The possibility of incorporating into the system entries on other valuation bases was recognised there.

4.3 Because lack of uniformity in valuation would gravely impair international comparability of balance sheets, this chapter will develop the conceptual and practical basis of valuation in some detail. Entries in the revaluation account follow automatically from the method of valuation adopted for the balance sheet, and these will be mentioned only in certain cases.

A. The conceptual basis of valuation

1. Market values

4.4 Since the general basis of valuation for balance sheets has been clearly laid down, we do not need to devote much space to justifying the choice of current market value (market value, for short) as the common basis. We are more concerned in this chapter with the consequences of

---

14/ Op. cit.

adopting this basis, but the rationale must be explained briefly in order that the consequences may be explored.

4.5 In national accounting we are concerned with combining and comparing the accounts, in this case the balance sheet, of all the transactors in the economy; and it is 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; and liabilities must also be treated uniformly as to valuation basis and date of prices, no matter who owns them. It is not essential that financial claims should be valued identically when they are held as assets and when they are owed as liabilities, but adjustment entries would be necessary if liabilities were valued on a different basis from financial assets. This situation is on contrast with that in private accounting. Here the accountant is concerned with only one transactor at a time, and the accounts serve the purpose of recording 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 basis of valuation for assets, and the fact that the costs are an amalgam of figures expressed in different price levels is ignored. Liabilities are naturally expressed in terms of the 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 stock exchange investors. Assets are sometimes revalued in terms of more recent price levels; and accountants are continually discussing how best to portray the effects of inflation in conventional accounts.

4.6 For assets there will be little doubt that current market value is the correct basis. Acquisition cost is ruled out completely because many different price levels are involved, and the obvious set of common prices to take is that ruling on the date of the balance sheet. In the case of liabilities, however, the choice of market value does not seem so natural. Even conventional private accounting often computes the market value of assets, particularly financial claims, but there is no tradition of

indicating the market value of liabilities. Basically, however, the objection to using nominal value as the common basis of valuation for liabilities is the same as the objection to using cost of acquisition for assets: it completely ignores the element of time, represented in this case by the date on which the liability is due for redemption. The market value of a liability is an approximation to the discounted value of the future liability to redeem a debt, computed at the market rate of interest. Liabilities discounted in this way fulfil the criteria stated above for a common basis of valuation, but it can also be held that debtors would be irrational if they took no account of the date of redemption in their financial calculations. They can be thought of as establishing an actual or notional sinking fund. A rise in the market rate of interest will reduce the present value of a future liability, and it also implies that the sinking fund will be smaller.

4.7 We have established that market value is a rational choice as the common basis of valuation in the balance sheets of the system. It is an appropriate basis for this purpose, but there are situations in which other bases are relevant. No one method of valuation can cover all situations, and transactors commonly value items differently according to the purpose that they have in mind. A transactor who faces bankruptcy is concerned with the immediately realizable value of any assets that he may have; and a bidder for a company is concerned with its value once he has made certain changes in organisation and management. There is a host of alternative valuations which could be made, each suitable for a particular circumstance. In a later section of this chapter we shall consider the choice of a few of the most important for incorporation into the system.

2. Types of markets

4.8 The statement that valuation is to be in terms of market values is not all that helpful on its own. The common definition of a market price makes it one arrived at in a transaction between a willing buyer and a willing seller, or alternatively one reached in an arm's-length transaction, into which only commercial considerations enter. The difficulty is that the

markets on which transactions fulfilling these conditions occur are of several different types.

4.9 There are two features of balance sheets in national accounting which act as a guide in determining whether or not a particular market is suitable for providing the market price data for use in balance sheets. The first arises from the fact that the balance sheets of transactors which are combined in sector 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 line of business and on the present basis. We need a valuation appropriate to the transactor as a going concern. This means that we cannot use prices from markets which impose a penalty on liquidation. The distinction is between markets for assets which are traded in the normal course of events and markets for assets which are traded rarely and then generally in the exceptional circumstances of financial distress or liquidation of the business of a transactor. Examples of markets which 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 on which only obsolescent assets are traded or which are used only when the owner is in financial difficulties are those for second-hand industrial plant and equipment and for second-hand furniture. Even with financial claims there are markets in some countries on which existing assets are normally traded only in conditions of distress; the market for house mortgages in Britain provides an example. None of these markets on which assets are not traded in the normal course of events is suitable for determining market prices for balance sheet purposes.

4.10 The second feature of balance sheets, in this case both those of national accounting and those of private accounting, is that they value each asset and liability separately. This feature rules out any valuation which uses prices appropriate to the value of the whole transactor unit and then apportions the global valuation over the different assets and liabilities. It is not correct to value a whole company, either on the basis of the stock

exchange price of the shareholders' equity or on the basis of the prices paid in mergers and take-over bids. There are not many markets ruled out by this second feature, but it will be very relevant when the valuation of net worth is considered below.

3. Variants of market value

4.11 The ideal market for the purposes of balance sheets is the stock exchange. Not only is each of the assets which are traded completely homogeneous, but they are all listed with the appropriate prices at regular intervals. For securities quoted on a stock exchange it is therefore possible to obtain the prices of individual assets and of broad classes of assets, and it is also possible to arrive at the global valuation of all the assets of a particular type which are in existence. The information from the stock exchange can also be used to price unquoted securities by analogy; for this purpose it is quite legitimate to make an allowance for the inferior marketability of the unquoted securities, since stock exchange prices recognize degrees of marketability within the range of quoted securities.

4.12 Unfortunately the stock exchange is virtually unique in most countries. There are many other markets from which prices would be acceptable, but they are all deficient in some respect. None of them will enable a global valuation of all the assets of a particular class which are in existence to be made, and most of them are concerned with assets which are far from homogeneous. However, even the most dispersed market trading in the most heterogeneous assets can be made to yield useful price information given a reliable reporting agency and the possibility of classifying transactions into meaningful categories. 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.

4.13 The types of market considered so far all yield price information which can be applied directly to a quantity indicator to produce a total market value of different classes of assets held by sectors and of different classes of sector liabilities. Between them they cover nearly all financial

claims, real estate, livestock, works of art, antiques and similar items. Not all price information can be applied in this direct way, however, and when price information is used indirectly we can regard the resulting valuation as a variant of market value even though it is conceptually on the same basis.

4.14 The most important variant is the use of written-down replacement cost for most tangible fixed assets. The commonest way of arriving at estimates of the total replacement cost of a class of fixed asset is to compute net capital formation over a period equal to the assumed useful life of the asset and to revalue the past stock of assets by means of a price index based on the prices of newly-produced assets; this is the perpetual inventory method. The price information is of the same type in the other methods of computing total replacement cost, whether the approach is through a sample of fire insurance values or through a complete national census of fixed assets. Quite apart from the vexed question of quality changes, which makes the compilation of any price index of capital goods difficult, the replacement cost estimates arrived at in any of these ways can be taken only as approximations to market values. The main deficiency is that the forces of supply and demand find little reflection in the producers' prices used in the estimates. This is not a great problem with plant and equipment, but it is far from realistic to assume that the market value of long-lived assets declines steadily over the useful life. Particularly in the case of buildings, for which estimated values arrived at by a variety of methods often have to be combined, the fact that some reflect market forces while the basic replacement cost estimates do not, can be a practical problem.

4.15 The other two variants of market value both suffer from the imprecision of the market price data which have to be used, even though the values arrived at are conceptually no different from stock exchange values. The first occurs in valuing assets the returns from which are either delayed (as with timber) or speard over a lengthy period (as with subsoil assets). Normal price information is used for valuing the ultimate output, but in

addition a rate of discount must be used to compute the present value of future returns. The converse of this case occurs when total values are computed by capitalizing income, and it is necessary to derive a capitalization factor from market information. Both the rate of discount and the capitalization factors should undoubtedly be derived from information based on transactions in the particular types of asset under consideration - forest lands, mines and quarries, ground rents and leases. This information, however, is nearly always vague, and 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.

B. Valuation of specific assets and liabilities

1. Fixed assets

4.16 For most of the assets coming under the general heading of fixed assets a valuation at written-down replacement cost is entirely appropriate. The same method of arriving at an approximation to market value will also be necessary for the dams, dikes and other installations connected with irrigation and flood control projects of category 11.4.1 of table 3.1. No depreciation is allowed for in the SNA in respect of roads, dams or breakwaters which are assets of government services. Although occasional benchmark estimates may be obtained from surveys of fire insurance values or national censuses of fixed assets, the method normally used will be the perpetual inventory as fully described in Goldsmith (3, chapter 3). Since the calculation of the perpetual inventory exactly mirrors the sequence of accounts (opening balance sheet, capital finance account, revaluation account and closing balance sheet), entries for the appropriate accounts are automatically provided. Paragraph 7.21 of A System of National Accounts[15/] provides

15/ Op. cit.

that straight-line depreciation shall be used for calculating the capital consumption of fixed assets, and the same procedure must obviously be followed in the perpetual inventory calculation. In the case of consumer durables, expenditure on which is not counted as fixed capital formation, there is a strong case for using diminishing balance depreciation in the perpetual inventory calculation, since the shape of the depreciation curve is then a closer analogue to the actual course of market prices of consumer durables over their useful lives.

4.17 There are certain exceptions to the use of a replacement cost valuation under the heading of fixed assets. These are detailed in the succeeding paragaphs, and the general question of the valuation of land and buildings is dealt with in paragraphs 4.22 through 4.29.

4.18 The first exception is livestock, for which a perpetual inventory calculation is not appropriate because of the element of natural growth. Auction prices for livestock are usually available, and these can be applied to figures for the head of livestock. It will be noted from paragraph 3.50 that it will be necessary to have figures for both number and auction prices in terms of age groups of the different classes of livestock if the element of natural growth is to be separated from revaluations due to price changes.

4.19 Leaving aside for the moment the extent to which replacement cost can be used for the valuation of buildings, there is clearly one class of building for which it is inapplicable by definition, that of historic monuments. It must be confessed that almost any valuation of a historic monument could be defended, anywhere between zero, on the grounds that it was fully depreciated, and the value which would be paid by a wealthy individual or corporation to have the building dismantled and erected elsewhere. Since a compromise is necessary, perhaps that suggested in paragraph 7.20 of A System of National Accounts[16/] for government construction works provides the best answer. Under this procedure historic monuments would be valued by computing the cost of erecting a similar building today, no depreciation being deducted

---

16/ Op. cit.

on the assumption that maintenance expenditure is sufficient to maintain the structure in its original condition.

4.20 The notes to table 3.1 draw attention to the fact that certain classes of non-reproducible asset, such as works of art, antiques and collectors' items, are included under fixed assets if they are owned by enterprises, government or non-profit institutions and under consumer durables if they are owned by households. A replacement cost valuation is conceptually impossible. Auction prices are generally available, but information is usually lacking on the population of items to which these prices should be applied. A more rewarding approach might be through a survey of insurance values.

2. Stocks

4.21 In the transaction accounts, additions to, and withdrawals from, stocks are valued at purchasers' values when they are acquired from outside the establishment or at producers' values when they are processed internally. The physical increase in stocks is valued 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 revaluation account. This valuation of the physical increase in stocks is consistent with carrying them at market value in balance sheet. It will sometimes happen that the balance sheet figures for stocks will have to be obtained from the figures of book value in private accounting. It is worth noting that, with a quick turnover of stocks, the difference between market value and book value is very much less than the figure for stock appreciation. As an example we may assume that the book values of stocks are based on the first in, first out principle, that stocks in hand at any one time have been built up over the preceding three months and that prices of stocks have risen by 4 per cent during the preceding year. At the end of the year the excess of market value over book value will be only one-eight of 4 per cent, or 0.5 per cent.

3. Non-reproducible tangible assets

a. Land

4.22 However simple the system of land tenure in a country may be, there are considerable difficulties in valuing the ownership of land the 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 a perpetual inventory. We shall deal with the question of global valuation of land first.

4.23 The calculation must be performed in two parts, the first part relating to the valuation of land which is separate from buildings - cultivated land, amenity land and the land underlying forests and plantations. The calculation is performed by multiplying statistics of area by indicators of prices. The statistics of both areas and prices must have some degree of classification by quality and use of the land and by region. A minor problem is that the prices for cultivated land often include farm buildings sold with the land. The other part of the calculation relates to land underlying buildings, and for this the normal method is to obtain site/structure ratios from valuation appraisals and to deduce the value of land from the replacement cost of buildings.

4.24 The complications begin when we come to estimate the institutional sector ownership, and they apply equally to land and to buildings. The nature of these complications in the context of the situation in Britain has been described by Revell (5, chapter 14). It may fairly be said that the ownership of real estate in Britain is more complex than in most countries, but the difficulties which we are considering arise under practically any conditions whenever there is a possibility of divorce between ownership and occupation. The problems are of three kinds: (i) 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; (ii) the separation of the different interests of transactors in the total

value of a site and the building erected on it; and (iii) the separation of the value of the land from the value of the building. The points can be made by considering three very simple cases.

4.25 The simplest case of all is that of complete owner-occupation, in which the occupier owns both the building and the site on which it is erected. There is no problem and the calculation can proceed exactly as for global valuation. Fortunately this situation generally obtains in a high proportion of cases.

4.26 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 of V and the site a 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 whole period of the lease. Let us further assume that if the lease were being negotiated today the rental would be 2R. (The period which 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 higher than 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 market rate of interest; 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 sub-let the property to somebody else. In the latter case the lessee could secure 2R, and in the former case the price fetched by the lease would be based on the ratio R/2R 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 a part of the value of the building and site should be attributed to the occupier and included in his balance sheet. It is quite clear that we should be double-counting if we did as has been suggested and credited the owner with the value of both the site and building, while at the same time

valuing leases as non-financial intangible assets. If we include leases in the classification of non-financial intangible assets, it follows that the total value of institutional sector ownership shown under buildings will be less than the global replacement cost estimate and that the total value of sector ownership of land will be less than the global value of land. It is better to treat leases as representing for both lessor and lessee a share in the total valuation of the site and building. It is, of course, only leases for a period of years that are involved here. Tenancies which can be terminated by the Landlord on notice of up to one year confer no share of the value on the occupier.

4.27 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 between the transactors. Exactly the same reasoning applies to cultivated land owned by one transactor and leased to another, and to mineral rights, sporting rights and so on.

4.28 Because of the differences in land tenure systems and data availability in various countries only a generalized solution for estimating the sector ownership of land and buildings can be offered. We assume that the following estimates have been made: (i) a global replacement cost estimate of the value of buildings, (ii) a global estimate of the value of land, with a separate estimate for the value of land underlying buildings, (iii) the total of rents for land paid and received by each sector and (iv) the total of rents for buildings paid and received (see paragraphs 6.47 and 6.48 of A System of National Accounts[17]. For rents paid (but not for rents received) it is necessary to have a split between rents on short tenancies and rents on

---

17/ Op. cit.

leases for a period of years. This split can usually be determined fairly easily, since short tenancies generally apply only to certain classes of property let to certain types of occupier. If it is found that the replacement cost estimate of buildings deviates far from the actual market value of buildings as evidenced by transactions, it is suggested that the replacement cost estimate should be revised by using an index of market prices of buildings in place of the construction cost index when carrying out the perpetual inventory.

4.29 Since it is only cases in which ownership and occupation are divorced that present problems, the calculation of institutional sector ownership of both land and buildings can start by dealing with cases of complete owner-occupation. The value to the owner of tenanted land and tenanted buildings can then be computed by capitalizing the rents received by each institutional sector for land and for buildings. When the value of owner-occupied property and the value to the owner of tenanted property are added together, they should in principle fall short of the global valuation by an amount equal to the share of ownership accruing to occupiers by virtue of the leases which they hold. This calculation is performed separately for land and for buildings, and the two residuals can be distributed over sectors in accordance with the rents paid by each sector other than for short tenancies. A residual method of valuation is never very satisfactory, especially as there is a danger that the capitalization factors used on rents are 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: (i) an indication, sector by sector, of the extent to which rents actually paid deviated from rental levels on newly-negotiated leases; and (ii) an indication of the average maturity (period to next rent revision) of leases, sector by sector.

b. Forests and plantations

4.30 In many 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 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 to maturity and felling. Due allowance is made for the value of thinnings.

4.31 Plantations, orchards and vineyards differ from forests in that they yield crops over a period after reaching maturity, but the method of valuation follows the same principles as for timber.

c. Subsoil assets

4.32 The method of valuation of subsoil assets is once again by discounting the estimated net proceeds of sale, 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 (1) discusses several of the conceptual and practical problems of estimating the value of reserves of minerals and other subsoil assets. For a number of reasons this is a heading under 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: (i) new discoveries may be very extensive, covering whole new fields of deposits, (ii) changes in technology may bring extensive deposits within the range of those commercially exploitable and (iii) changes in market conditions, particularly for fuels, may entail drastic revisions of future rates of output.

4. Non-financial intangible assets

4.33 The difficulties of producing any valuation of non-financial intangible assets, let alone a meaningful one, have hitherto deterred most workers on balance sheets from including them as an asset category. In the nature of things the full information needed can never be available from private accounting, and the valuation of a monopoly profit presents considerable conceptual difficulties. The solution suggested below is no more than a rough and ready way of producing some practical and meaningful answers.

4.34 First of all it is necessary to distinguish three separate cases.

(i) When the intengible asset (patent, trade mark, copyright or just "know-how") is owned by one transactor and exploited under licence by another, there is a royalty payment, but usually no entry in the private balance sheet of the owner.

(ii) When outright ownership of the patent or other right has been transferred to the exploiting transactor, it normally figures in his private balance sheet (either at cost or written down to a nominal sum), but there is no royalty payment.

(iii) When the process or work which is the subject of the patent or other right has been developed by the exploiting transactor, there is no royalty and no entry in the private balance sheet. the same situation arises when there are collective agreements between enterprises in an industry, as in the oil industry, to allow free access by parties to the agreement to all patents developed by members of the group.

In all three cases there is an intengible asset which should be valued, but only partial information is available from private accounts. Even where a royalty paid or received or the cost of acquiring a patent or other right is recorded, it is normally distinguished separately in published private accounts only when the figures are material in relation to the other magnitudes in the accounts.

4.35 The solution suggested is a direct approach to enterprises, asking them to provide two pieces of information: (i) the figures for royalties actually paid and received, distinguishing payments to and from residents and non-residents; and (ii) for rights which are owned and exploited by the enterprise, an estimate of the royalties which would be payable if the rights were owned by another transactor. Clear instructions will be necessary about the exclusion of management fees. The figures for royalty paid and received are in any case required for the transaction accounts. Once all rights have been reduced to the common basis of royalty payments, actual or notional, the market value of the assets may be obtained by applying a capitalization factor. The market for such rights is usually imperfect, and it will be

difficult to obtain details of prices actually paid for rights which have previously been the subject of royalty payments. A conservative valuation would seem appropriate because royalties are related to output, and estimation of future outputs of specific commodities by a particular enterprise must be hazardous.

5. Financial assets and liabilities

4.36 Apart from the two items relating to net equity, which are dealt with separately below, financial claims fall into two clear groups. The first group consists of short-term claims and of other claims which can be realised on demand or at short notice at their full nominal (face) value. These are clearly to be carried in balance sheets at nominal value, and there can be no question of revaluations other than those arising from changes in currency exchange rates and adjustments. The second group comprises all claims (other than short-term claims) which can be transferred as assets from one transactor to another. These are to be valued at the value at which they could be transferred, their current market value. There is only one case of doubt, "long-term loans n.e.c.". The arguments advanced above (in paragraph 4.6) about the relationship between market value and discounted present value would lead us to value these at a computed "market" value, but the information about interest rates and maturity is usually lacking. They are included in the group to be valued at nominal value. Many of them provide for frequent revisions of interest rate, and where this applies nominal value is the correct valuation in any case.

4.37 The classification of financial claims in table 7.2 of A System of National Accounts[18/] is such that only three of the items will be carried at market value: 8.1, Gold; 8.5 and 9.5, Bonds, long-term; 8.6 and 9.6, Corporate equity securities, including capital participations. Gold will normally be valued 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. For the other two classes of claims, market value is computed with reference to stock exchange prices. Securities not quoted on a stock exchange should be valued by analogy with comparable

18/ Op. cit.

quoted securities, fixed-interest securities on the basis of interest rate and maturity and equity securities on the basis of price/earnings ratios, with an allowance for inferior marketability in both cases.

4.38 There are two respects in which stock exchanges sometimes differ in reporting prices and in which transactors differ in recording values, and a standard practice is necessary. It is suggested (i) that securities should always be valued, both as assets and as liabilities, on the basis of the price to a seller (i.e. the lowest point of the range of prices quoted) and (ii) that prices of bonds should be adjusted to exclude accrued interest, which should be accounted for under accounts receivable for holders of bonds and under accounts payable for issuers of bonds.

4.39 Trade credit is among the claims to be valued at nominal value. This means that figures can be taken direct from the private accounts of transactors; there will certainly be no other way of obtaining them. Although no revaluation of these private accounting entries is called for, there is one point to note: trade credit as an asset must be recorded after adding back any provisions for bad and doubtful debts which have been deducted.

C. Net worth and net equity

4.40 Net worth is the difference between the total assets and total liabilities of a transactor. All assets and liabilities are valued at market value, and the revaluation of net worth is the net result of the revaluations of the separate assets and liabilities. Net equity is a concept developed for the purpose of transferring the whole or part of the net worth of one transactor to another. The conceptual bases of balance sheets which have been described in this chapter and the previous one provide clear answers for deciding in what circumstances and to what extent it is proper to transfer net worth in this way.

1. Independent net worth

4.41 The principle was established in paragraph 4.10 that each asset and liability is valued separately in balance sheets, and the normal situation is that the total of assets is different from the total of liabilities, the

difference representing positive or negative net worth. This applies equally to corporate and to unincorporated transactors, because corporate equity securities are carried at market value in the balance sheets both of the holder of the securities and of the transactor which has issued them. This valuation of corporate equity securities as an asset is in accordance with the principles established in paragraph 3.12 that only the assets and liabilities which can be attributed to an individual transactor should figure in his balance sheet and in paragraph 4.9 that valuation must be based on the assumption that a transactor is continuing in his present line of business and on the present basis. While the enterprise continues in being, the individual shareholder can realise only the value conferred by his holding of equity securities. The valuation on the same basis of corporate equity securities as a liability is also in accordance with these principles, since it leaves an element of independent net worth in the balance sheet of the enterprise to represent collective wealth which can be appropriated by the individual shareholder only when the enterprise is liquidated or sold to another enterprise. This independent net worth is the counterpart of the retained saving referred to in paragraph 7.71 of A System of National Accounts[19/]. It occurs in the case of all transactor units, not only in corporate enterprises.

4.42 The situation is different when an individual shareholding constitutes a controlling interest, which is defined in paragraph 5.61 of A System of National Accounts[19/] as a holding of 50 per cent or more of the equity securities. In this case the individual shareholder has the possibility of realising the entire worth of the enterprise by selling it, and it would seem that any residual net worth of the enterprise ought to be credited to the holder of the controlling interest. In this sense a subsidiary corporate enterprise ought as a matter of principle to be treated in exactly the same way as a branch, which is regarded as a quasi-corporate enterprise when it has to be separated for statistical reasons from the enterprise of which it forms a part. This point is developed further in paragraph 4.45 below. It

---

19/ Op. cit.

also follows that the equity securities held by minority interests in a subsidiary corporate enterprise are to be valued at market value, and that the minority interests are not to be credited with any part of the independent net worth of the subsidiary enterprise.

4.43 The corollary of the treatment on occasion of subsidiary enterprises as independent units was outlined in paragraph 3.29, which laid down criteria for deciding whether corporate equity securities were to be included in balance sheets or not. There are two cases. When the subsidiary enterprise forms part of the same statistical unit as its parent, which will be the case when both are resident enterprises in the same institutional sector or subsector, the equity securities owned by the parent are consolidated out; the only equity securities shown are those held by minority interests. When the subsidiary enterprise is treated as an independent statistical unit, the equity securities held by both parent and minority interests are shown.

2. Net equity in quasi-corporate and subsidiary corporate enterprises

4.44 The valuation of the proprietors' net equity in quasi-corporate enterprises does not normally present problems because it is usually the entire net worth of the enterprise. Entering net equity in quasi-corporate enterprises as a liability of the enterprises will thus normally remove the possibility of any independent net worth. The exception to this which was noted in paragraph 3.28 refers to enterprises which have the legal form of partnerships. These may well have independent net worth because the partnership deed commonly restricts the withdrawals of partners. The independent net worth is conceptually identical to that of corporate enterprises, since it represents the value of that part of the net assets of the enterprise which the partners cannot appropriate until the partnership is dissolved.

4.45 In the guidelines of the SNA in respect of the transaction accounts, incorporated subsidiaries of foreign corporations which are located in a country or of resident corporations which are located abroad, are treated on a par with other incorporated enterprises. This implies that the ownership of the parent enterprise should be represented by its holding of corporate equity securities only, thus allowing the subsidiary to have independent net

worth. The arguments used are that subsidiaries are legally independent bodies and that the dividing linebetween subsidiaries and non-subsidiaries is often arbitrary. These arguments may be questioned on the grounds that they apply also to resident subsidiaries, which are to be treated as part of the same statistical unit as the parent unless they are in a different institutional sector. It was also argued that national governments often impose restrictions on resident subsidiaries of non-resident companies, but this argument applies with equal force to branches of non-resident companies, whose net worth is transferred back to the parent through the item "net equity in quasi-corporate enterprises". In order to restore parity of valuation between overseas subsidiaries on the one hand and resident subsidiaries forming part of the same family of entities and branches, both resident and non-resident, on the other, it would seem desirable to transfer the net worth of all subsidiary corporate enterprises which are treated as separate statistical units back to the parent. This could be done quite simply by extending the definition of net equity to read "net equity in quasi-corporate and subsidiary corporate enterprises". This would figure only on the balance sheet and revaluation account; it is argued in paragraph 4.48 that the entries in the capital finance account could remain as already decided. The proposed treatment would apply equally to non-resident subsidiaries and to resident subsidiaries forming part of a different statistical unit from the parent, and it would also be necessary to make similar entries in the case of resident subsidiaries of non-resident corporations.

4.46 Even if it were agreed that the net worth of the subsidiary corporate enterprise should be credited to the parent, there would remain a problem of interpretation, which may be described on the basis of the following skeletal balance sheet of a subsidiary corporate enterprise.

Balance sheet of a subsidiary corporate enterprise

Fixed assets	Corporate equity securities
Financial claims	(i) Held by parent
(i) On parent	(ii) Held by minority interests
(ii) On third parties	Liabilities
	(i) To parent
	(ii) To third parties
	Net worth
Total assets	Total liabilities

It is, of course, only in the case of a resident subsidiary corporate enterprise treated as an independent statistical unit that such a balance sheet would form part of the balance sheet of an institutional sector. In the case of non-resident subsidiary corporate enterprises a notional balance sheet would be necessary for computing the net claims on the rest of the world, and it would be displayed only as table 32 in the supporting tables to the accounts.

4.47 The two valuations which are possible are: (i) the value at which the subsidiary enterprise would be consolidated into the accounts of the family of entities and (ii) the value of the subsidiary enterprise as an independent statistical unit. The second treatment would record the value of net worth as computed from the skeletal balance sheet above, whereas the first would consolidate out financial claims on the parent and liabilities to the parent (but not corporate equity securities held by the parent). Parity of valuation with subsidiaries forming part of the same statistical unit requires the first treatment.

4.48 It is clear that the greater part of the net equity of parents in subsidiary corporate enterprises will arise from revaluations of fixed assets and net financial claims in excess of the revaluation of the corporate equity securities issued by the subsidiary, and it is quite reasonable

to accommodate all the changes in net equity in the revaluation account. The purchase of a subsidiary which is to be treated as an independent statistical unit will still figure in the capital finance account as a purchase of corporate equity securities, with perhaps a small initial entry in the revaluation account to take care of any divergence between the price paid for the equity securities and the net worth of the enterprise arrived at by valuing its assets and liabilities separately.

3. Net equity of households on life insurance reserves and on pension funds

4.49 The treatment of capital gains (or losses) on assets held against life insurance reserves outlined in paragraph 7.96 of A System of National Accounts[20/] will clearly result in an independent net worth remaining in the balance sheet of life insurance companies even after allowance has been made for any capital bonuses dealt with in the revaluation account (see paragraph 3.43). The treatment of capital gains (or losses) on assets held against pension funds envisaged in paragraph 7.98 of the publication[20/], would remove the possibility of any independent net worth in pension funds. It was argued in paragraph 3.44 that pension funds do not differ in their accounting treatment from life insurance companies. The figure for the "fund" which appears on the liabilities side of the balance sheet of a pension fund represents the present value of future pension claims, and the rates of pension on which the members' valuation of their interest in the fund depends are not immediately changed to take account of capital gains (or losses). In these circumstances it seems entirely appropriate that pension funds should be treated in the same way as life insurance companies, thus restoring to them the possibility of an independent net worth. It cannot, of course, be argued that pension funds should be treated differently from life insurance companies because they are all mutual organizations. This would be to resurrect the concept of collective wealth, which we dismissed in paragraphs 3.12 and 3.13.

4.50 It was urged in paragraph 4.31 that the present value of future pensions from unfunded schemes and from social security funds should be included in the balance sheet of households. Private accounting normally

---

20/ Op. cit.

covers future unfunded pension liabilities under the heading of provisions; by replacing an imperfectly-valued entry in private accounts with an actuarial computation we convert the provision into a definite liability. For social security funds it is probable that an actuarial valuation will be available, and the computation of one for private unfunded schemes will be no more difficult than the estimation of the imputed contributions already called for. All changes in the net equity of households on unfunded pension schemes and on social security funds would appear only in the revaluation account.

D. Other bases of valuation

4.51 All the discussion in this chapter so far has been of valuations appropriate for the balance sheets of the SNA. For this purpose, as we have seen, it is essential to have a common basis of valuation for all assets and a common basis for all liabilities. We have argued in paragraphs 4.5 and 4.6 that current market value is the most appropriate basis for both assets and liabilities. It cannot be contended, however, that market value is the correct basis for valuation in all circumstances. If we take the example of a household, we can see that many different valuations of its assets and liabilities are needed for different circumstances. At a time of financial crisis it will want to know the immediately realisable value of its assets or the value of the assets as collateral for borrowing. At all times the head of the household will want to ensure that his dependents will be provided for in the event of his death, and he will compute the probate values of his assets and liabilities and allow for any death duties payable on the net value. The private accounts of enterprises normally value assets at acquisition cost and liabilities at nominal value. Even though it is unlikely that the managements of enterprises are so naive as to ignore the dates on which their liabilities are due or changes in the values of their assets since acquisition, these conventional values have some influence on their behaviour. This is particularly true of those financial enterprises which have to follow obligatory balance sheet ratios based on the conventional values. It is thus reasonable to incorporate into the system figures indicating alternative valuations.

4.52 It can be seen from the few examples given above that the number of alternative bases of valuation which are relevant in different circumstances is large. In order to preserve the coherence of the system of balance sheets, selection is necessary. The selection must take into account the level of aggregation at which the different bases are relevant. It is suggested in the next chapter that, in the case of the main balance sheets of the system, memorandum items should be entered for the nominal value of liabilities and that in the case of households, the value of sums assured and the surrender value of net equity on life insurance reserves and on pension funds should also be indicated in a memorandum. In the supporting tables, revaluations are accounted for in detail so as to show for each institutional sector: (i) original cost and accumulated revaluations of non-financial assets, (ii) cost of acquisition and accumulated revaluations of financial assets and (iii) nominal value and accumulated revaluations of liabilities. One minor point arises in the case of liabilities: an initial entry in the revaluation shown in the supporting table will be necessary to cope with any divergence between sums received for the issue of a liability and its nominal value.

CHAPTER V. THE STANDARD ACCOUNTS AND TABLES

5.1 This chapter sets out the proposed standard accounts and tables in respect of revaluations and balance sheets. These proposals complete the standard accounts and tables of the SNA set out in chapter VIII of A System of National Accounts[21]. That chapter described in some detail the purposes of the standard accounts and tables in general; we can restrict ourselves here to pointing out certain differences in character and structure between the standard accounts and tables relating to transactions and those relating to revaluations and balance sheets. The text of this chapter also gives a brief description of the proposed standard accounts and tables.

5.2 The standard accounts are detailed in annex 5.2 and the standard tables in annex 5.3, in both cases with notes on particular points. Annex 5.1 gives the codes used to identify entries in the revaluation accounts and balance sheets. In all cases the numbering follows on from that given in chapters VIII and IX of A System of National Accounts[21].

A. Frequency and priorities

5.3 The question of the frequency with which and the dates for which balance sheets should be published is one that falls naturally into the realm of the practical problems to be discussed in the proposed additional chapter on statistical sources and compilation of balance sheets. In that chapter we will suggest a means whereby estimated balance sheets can be constructed with the same frequency as the other accounts of the system. The key to this possibility is the ability to make independent estimates of revaluations, so that they, together with the transactions recorded in the capital finance account, enable one to proceed from one balance sheet to another. If the problems of estimating revaluations can be solved, there is no reason why balance sheets should not be produced annually, or even quarterly, along with the transaction accounts. Since the opening balance sheet, the capital finance account, the revaluation account and the closing balance sheet form a complete sequence, the balance sheets must obviously relate to the end of the period covered by each set of transaction accounts. Because of the structure of balance sheets there is everything to be gained by

21/ Op. cit.

producing balance sheets for each institutional sector. Without the internal checks which a complete system of balance sheets provides, there can be little confidence in balance sheets covering only part of the economy. For this reason there appears to be no point in recommending priorities among the accounts for different institutional sectors.

B. The standard accounts

5.4 The standard accounts of the system are completed by one account under the Accounts I and by creating a further class of accounts, Accounts VII, to accommodate both revaluations and balance sheets. Within the Accounts VII, two separate accounts are created: Accounts VII 7 for the revaluation account and Accounts VII 8 for the closing balance sheet. In order to portray the differences in sources of finance of the five institutional sectors the Accounts VII are divided into A, B, C, D and E, each with the detail appropriate to that institutional sector.

5.5 There is one basic difference between the standard accounts relating to transactions and those described here for revaluations and balance sheets. The former standard accounts are designed to portray the inter-relations between the different accounts; it is generally possible to follow entries through from one account to another. The difficulty in extending this treatment to the revaluation accounts and balance sheets arises from the fact that differences between opening and closing balance sheets are accounted for on the capital finance account and the revaluation account taken together. Since the capital finance account has already been included elsewhere in the system, it would involve repetition to bring it also into the extension of the standard accounts. The accounting difficulty arises from the basic difference in the character of the accounts: the balance sheet, the capital finance account and the revaluation account form an additive sequence, whereas this is not true of accounts elsewhere in the system. In the case of the Accounts I 8 it has been thought worthwhile to show this sequence in summary form, whereas the Accounts VII 7 and the Accounts VII 8 stand on their own, with no immediately traceable links with other accounts.

1. Accounts I 8

5.6 Although the Accounts I 8 appear under the heading of the consolidated accounts of the nation, they are combined accounts rather than consolidated accounts. They show the combined balance sheets, both opening and closing, of all institutional sectors, and give a summary treatment to the two elements of accumulation and revaluation in accounting for the differences between opening and closing balance sheets. The justification for the inclusion of combined balance sheets under the general heading of consolidated accounts is analytical usefulness. The two main purposes of this type of account are, firstly, as we have indicated above, to show how the changes between opening and closing balance sheets are accounted for by accumulation and revaluations and, secondly, to enable a calculation of national wealth to be made. National wealth is the net worth of all institutional sectors. The Accounts I 8 show opening and closing national wealth and analyse the parts played respectively by accumulation and revaluations in the change between the opening and closing figures. The alternative calculation of national wealth by adding together the non-financial assets owned by all institutional sectors and net claims of residents on the rest of the world is not included in Accounts I 8, but it could usefully be displayed as a memorandum item to the account.

2. Accounts VII

5.7 The Accounts VII 7 show for each institutional sector the revaluations of its assets, non-financial and financial, and of its liabilities. The revaluations are analysed into three main classes according to the scheme of classification of revaluations given in table 3.2 above, and the account is completed by an entry for net worth, the revaluation of which is the combined result of the revaluation of all assets and liabilities. It should be noted that no provision is made for a further analysis of revaluations into the full classification of table 3.2. This is because for nearly all the assets and liabilities specified the revaluation under each main heading falls naturally into one of the sub-categories of the classification. The exceptions arising from foreign currency exchange rate

changes and adjustments caused by more complete information are mentioned in the notes to the standard accounts. If these are given in memorandum entries, it should be possible to identify each revaluation unequivocally with each detailed item of table 3.2.

5.8 Only the closing balance sheet is displayed in the Accounts VII 8, as the opening balance sheet will already have been given in the tabulations for the previous year. The amount of detail specified for each institutional sector follows closely that given in the Accounts III 5 of the SNA. It is suggested in the notes that alternative valuations should be given in memorandum entries - the nominal values of liabilities and various alternatives for the net equity of households on life insurance reserves and on pension funds. In the latter case it should be noted that the alternative valuations do not usually refer to the whole value of the fund. Sums assured refer only to death claims or claims arising on maturity, annuities to those policies providing for future income and surrender values to policies which carry the right of surrender; there is no right of surrender for many claims on life insurance reserves and on pension funds.

C. The standard tables

5.9 Of the four standard tables of annex 5.3 all but one provide supporting entries for the Accounts VII 8, and the first two (tables 29 and 30) support the Accounts VII 7 as well.

5.10 Table 29 shows the perpetual inventory calculations by which the balance sheet entries for non-financial assets are arrived at. It details both the opening and closing stocks of assets at original cost and at current replacement cost, with a column for accumulated revaluations to provide the link between the two valuations, and shows how the change during the year is accounted for by accumulation (entries on the capital finance accounts) and by the three main classes of revaluation. Since all the information required for this table is essential for the compilation of balance sheet entries, it should present no particular difficulty. Separate tables are needed for each institutional sector.

5.11 Table 30 relates to financial assets and liabilities, and it has the

same form as table 29 even though the balance sheet entries for financial claims are not necessarily arrived at by means of a perpetual inventory. The information needed for net acquisitions of assets and for net incurrence of liabilities will already have been detailed in table 24. Only one column is provided for revaluations since they are mainly caused by changes in market prices, but, if revaluations due to changes in foreign currency exchange rates and the cancellation of corporate securities on consolidation are important, they could be accommodated in separated columns instead of appearing only as memorandum items. The table also provides for alternative valuations, at cost of acquisition in the case of financial assets and at nominal value in the case of liabilities, with accumulated revaluations once again providing the link with current values. Separate tables are needed for each institutional sector.

5.12 Table 31 provides the balance sheet counterpart to standard table 24 of the SNA on transactions in financial claims, and could well be given in similar detail. In the compilation of balance sheets this table can act as a worksheet for the balancing of the totals of each financial claim identified as assets and as liabilities.

Annex 5.1 Coding of entries in standard accounts and tables for revaluation accounts and balance sheets

5.13 The coding of entries in the standard accounts for revaluation accounts and balance sheets follows on from the codes allotted to transactors' accounts and transactions in annex 8.1 of A System of National Accounts.[22] Any capital transactions which appear in the revaluation accounts and balance sheets are given the same numbers as in the earlier accounts of the system. Items in the balance sheets and revaluation accounts for financial claims are given the same codes as the transactions in the same assets and liabilities for the capital finance accounts. The systemof coding is extended by codes for two additional accounts and for the classification of non-financial assets and types of revaluation.

5.14 Table 5.1 shows the codes of the two other accounts which are referred to in revaluation accounts and balance sheets, and extends the system of

22/ Op. cit.

coding by allotting codes to the revaluation account and the balance sheet.

Table 5.1 The codes for transactors' accounts

Account	Code
Capital finance account	5
External transactions, all accounts	6
Revaluation account	7
Balance sheet	8

5.15 Table 5.2 details those transactions which appear in the revaluation accounts and balance sheets, covers entries in revaluation accounts and balance sheets for financial claims by repeating the codes for transactions in financial claims and extends the coding to cover non-financial assets and types of revaluation.

Table 5.2 The code for class and categories of entries in revaluation accounts and balance sheets

2. Disposition of goods and services
   2.5 Increase in stocks
   2.6 Gross fixed capital formation
3. Value added
   3.3 Consumption of fixed capital
7. Balancing items and transactions on capital account n.e.c. other than financial claims
   7.5 Purchases of intangible assets n.e.c., net
   7.10 Net worth

Financial claims and transactions in financial claims: 8. Financial assets; 9. Liabilities

   8.0 Total holdings of financial assets/net acquisition of financial assets
   9.0 Total liabilities/net incurrence of liabilities
   8.1 Gold
   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

Table 5.2 (continued) The codes for class and categories of entries in revaluation accounts and balance sheets

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	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 claims
10.	Reproducible tangible assets
10.1	Fixed assets
10.2	Stocks
10.3	Consumer durables
10.3.1	Furniture, fixtures, etc.
10.3.2	Major household appliances
10.3.3	Personal transport equipment
10.3.4	Other consumer durables
10.4	Military durables
11.	Non-reproducible tangible assets
11.1	Land
11.2	Forests and plantations
11.3	Subsoil assets
11.4	Water installations and fisheries
12.	Non-financial intangible assets
12.1	Patents, trade marks and copyrights
12.2	Other
13.	Revaluations
13.1	Revaluations due to price changes
13.2	Adjustments
13.3	Other net increases in value

Annex 5.2 The standard accounts

List of standard accounts and notes

I. CONSOLIDATED ACCOUNTS FOR THE NATION

Account 8. Opening and closing national balance sheets

8.10.1 Fixed assets 8.10.2 Stocks 8.10.3 Consumer durables 8.10.4 Military durables 8.11.1 Land 8.11.2 Forests and plantations 8.11.3 Subsoil assets 8.11.4 Water installations and fisheries 8.12.0 Non-financial intangible assets 8.8.0 Opening financial assets i. Claims on residents ii. Claims on non-residents	8.9.0 Opening liabilities i. Claims of residents ii. Claims of non-residents 8.7.10 Opening net worth
Opening assets	Opening liabilities and net worth
Opening assets 5.2.5 Increase in stocks 5.2.6 Gross fixed capital formation 5.3.3 Less Consumption of fixed capital 5.7.5 Purchases of non-financial intangible assets from the rest of the world, net 5.8.0 Net acquisition of financial assets i. Claims on residents ii. Claims on non-residents 7.13.1 Revaluations due to price changes 10.0+11.0+12.0 Non-financial assets 8.0 Financial assets i. Claims on residents ii. Claims on non-residents 7.13.2 Revaluations due to adjustments 7.13.3 Revaluations due to other net increases in value	8.9.0 Opening liabilities 5.9.0 Net incurrence of liabilities i. Claims of residents ii. Claims of non-residents 7.13.0 Revaluations of liabilities i. Claims of residents ii. Claims of non-residents 8.7.10 Closing net worth
Closing assets	Closing liabilities and net worth

Account 8 (continued) Opening and closing national balance sheets

8.10.1 Fixed assets 8.10.2 Stocks 8.10.3 Consumer durables 8.10.4 Military durables 8.11.1 Land 8.11.2 Forests and plantations 8.11.3 Subsoil assets 8.11.4 Water installations and fisheries 8.12.0 Non-financial intangible assets 8.8.0 Closing financial assets i. Claims on residents ii. Claims on non-residents	8.9.0 Closing liabilities i. Claims of residents ii. Claims of non-residents 8.7.10 Closing net worth
Closing assets	Closing liabilities and net worth

VII. REVALUATION ACCOUNTS AND BALANCE SHEETS

A. Non-Financial Enterprises, Corporate and Quasi-Corporate

Account 7. Revaluation account

7.10.1 Fixed assets 7.10.2 Stocks 7.11.1 Land 7.11.2 Forests and plantations 7.11.3 Subsoil assets 7.11.4 Water installations and fisheries 7.12.0 Non-financial intangible assets 7.8.1 Gold 7.8.5 Bonds, long-term 7.8.6 Corporate equity securities, including capital participations 7.8.10 Net equity in quasi-corporate enterprises	7.9.5 Bonds, long-term 7.9.6 Corporate equity securities including capital participations 7.9.10 Net equity in quasi-corporate enterprises
7.13.1 Revaluations due to price changes	7.13.1 Revaluations due to price changes
7.10.1 Fixed assets	
7.13.2 Revaluations due to adjustments	

Account 7 (continued) Revaluation account

7.10.1 Fixed assets (livestock) 7.11.2 Forests and plantations 7.11.3 Subsoil assets 7.11.4 Water installations and fisheries 7.12.0 Non-financial intangible assets 7.8.6 Corporate equity securities, including capital participations	7.9.6 Corporate equity securities, including capital participations
7.13.3 Revaluations due to other net increases in value	7.13.3 Revaluations due to other net increases in value
	7.7.10 Net worth
Total revaluations of assets	Total revaluations of liabilities and net worth

Account 8. Closing balance sheet

8.10.1 Fixed assets of which: i. Leased to other residents 8.10.2 Stocks 8.11.1 Land 8.11.2 Forests and plantations 8.11.3 Subsoil assets 8.11.4 Water installations and fisheries 8.12.0 Non-financial intangible assets 8.8.1 Gold 8.8.2 Currency and transferable deposits 8.8.3 Other deposits 8.8.4 Bills and bonds, short-term 8.8.5 Bonds, long-term 8.8.6 Corporate equity securities, including capital participations 8.8.7 and 8.8.8 Loans n.e.c. 8.8.10 Net equity in quasi-corporate enterprises i. In resident enterprises ii. In non-resident enterprises 8.8.11 Trade credit and advances 8.8.12 and 13 Other financial assets	8.9.4 Bills and bonds, short-term 8.9.5 Bonds, long-term 8.9.6 Corporate equity securities, including capital participations 8.9.7 Short-term loans n.e.c. 8.9.8 Long-term loans n.e.c. 8.9.10 Net equity in quasi-corporate enterprises, assets of: i. Residents ii. The rest of the world 8.9.11 Trade credit and advances 8.9.12 and 13 Other liabilities 8.7.10 Net worth
Assets	Liabilities

B. Financial Institutions

Account 7. Revaluation account

7.10.1 Fixed assets 7.10.2 Stocks 7.11.0 Non-reproducible tangible assets 7.12.0 Non-financial intangible assets 7.8.1 Gold 7.8.5 Bonds, long-term 7.8.6 Corporate equity securities, including capital participations 7.8.10 Net equity in quasi-corporate enterprises	7.9.5 Bonds, long-term 7.9.6 Corporate equity securities, including capital participations 7.9.9 Net equity of households on life insurance reserves and on pension funds 7.9.10 Net equity in quasi-corporate enterprises
7.13.1 Revaluations due to price changes	7.13.1 Revaluations due to price changes
7.10.1 Fixed assets	
7.13.2 Revaluations due to adjustments	
7.12.0 Non-financial intangible assets 7.8.6 Corporate equity securities, including capital participations	7.9.6 Corporate equity securities, including capital participations
7.13.3 Revaluations due to other net increases in value	7.13.3 Revaluations due to other net increases in value
	7.7.10 Net worth
Total revaluations of assets	Total revaluations of liabilities and net worth

Account 8. Closing balance sheet

Assets		Liabilities and net worth	
8.10.1	Fixed assets of which: i. Leased to other residents	8.9.2	Currency issued by the central bank and transferable deposits
8.10.2	Stocks	8.9.3	Other deposits
8.11.0	Non-reproducible tangible assets	8.9.4	Bills and bonds, short-term
8.12.0	Non-financial intangible assets	8.9.5	Bonds, long-term
8.8.1	Gold	8.9.6	Corporate equity securities, including capital participations
8.8.2	Currency and transferable deposits Of which by monetary institutions liability of: i. Resident institutions ii. The rest of the world	8.9.7	Short-term loans n.e.c. Of which by monetary institutions to: i. Resident institutions ii. The rest of the world
8.8.3	Other deposits	8.9.8	Long-term loans n.e.c.
8.8.4	Bills and bonds, short-term	8.9.9	Net equity of households on life insurance reserves and on pension funds
8.8.5	Bonds, long-term	8.9.10	Net equity in quasi-corporate enterprises, assets of: i. Residents ii. The rest of the world
8.8.6	Corporate equity securities, including capital participations	8.9.11, 12 and 13	Other liabilities
8.8.7	Short-term loans n.e.c. i. of which by the central bank, liability of the rest of the world	8.7.10	Net worth
8.8.8	Long-term loans n.e.c.		
8.8.10	Net equity in quasi-corporate enterprises i. In resident enterprises ii. In non-resident enterprises		
8.8.11, 12 and 13	Other financial assets		

C. General Government

Account 7. Revaluation account

7.10.1 Fixed assets 7.10.2 Stocks 7.10.4 Military durables 7.11.1 Land 7.11.2 Forests and plantations 7.11.3 Subsoil assets 7.11.4 Water installations and fisheries 7.12.0 Non-financial intangible assets 7.8.1 Gold 7.8.5 Bonds, long-term 7.8.6 Corporate equity securities, including capital participations 7.8.10 Net equity in quasi-corporate government enterprises	7.9.5 Bonds, long-term
7.13.1 Revaluations due to price changes	7.13.1 Revaluations due to price changes
7.10.1 Fixed assets 7.10.4 Military durables	
7.13.2 Revaluations due to adjustments	
7.10.1 Fixed assets (livestock) 7.10.4 Military durables (expenditure) 7.11.2 Forests and plantations 7.11.3 Subsoil assets 7.11.4 Fisheries 7.12.0 Non-financial intangible assets 7.13.3 Revaluations due to other net increases in value	
	7.7.10 Net worth
Total revaluations of assets	Total revaluations of liabilities and net worth

C. (continued) General Government

Account 8. Closing balance sheet

Assets		Liabilities and net worth	
8.10.1	Fixed assets	8.9.2	Currency issued by the treasury and transferable deposits
8.10.2	Stocks	8.9.3	Other deposits
8.10.4	Military durables	8.9.4	Bills and bonds, short-term
8.11.1	Land	8.9.5	Bonds, long-term
8.11.2	Forests and plantations	8.9.7	Short-term loans n.e.c.
8.11.3	Subsoil assets	8.9.8	Long-term loans n.e.c.
8.11.4	Water installations and fisheries	8.9.11, 12 and 13	Other liabilities
8.12.0	Non-financial intangible assets	8.7.10	Net worth
8.8.1	Gold		
8.8.2	Currency and transferable deposits		
	Of which by central government, liability of:		
	i. Resident institutions		
	ii. Rest of the world		
8.8.3	Other deposits		
8.8.4	Bills and bonds, short-term		
8.8.5	Bonds, long-term		
	Of which by central government, liability of central government		
8.8.6	Corporate equity securities, including capital participations		
8.8.7	Short-term loans n.e.c.		
8.8.8	Long-term loans n.e.c.		
8.8.10	Net equity in quasi-corporate government enterprises		
8.8.11 12 and 13	Other financial assets		

D. Private Non-Profit Institutions Serving Households

Account 7. Revaluation account

7.10.1 Fixed assets 7.11.0 Non-reproducible tangible assets 7.12.0 Non-financial intangible assets 7.8.1 Gold 7.8.5 Bonds, long-term 7.8.6 Corporate equity securities, including capital participations	
7.13.1 Revaluations due to price changes	
7.10.1 Fixed assets	
7.13.2 Revaluations due to adjustments	
7.12.0 Non-financial intangible assets	
7.13.3 Revaluations due to other net increases in value	
	7.7.10 Net worth
Total revaluations of assets	Total revaluations of liabilities and net worth

Account 8. Closing balance sheet

8.10.1 Fixed assets 8.11.0 Non-reproducible tangible assets 8.12.0 Non-financial intangible assets 8.8.1 Gold 8.8.2 Currency and transferable deposits 8.8.3 Other deposits 8.8.4 Bills and bonds, short-term 8.8.5 Bonds, long-term 8.8.6 Corporate equity securities, including capital participations 8.8.7, 8, 11 12 and 13 Other financial assets	8.9.7 and 8 Loans n.e.c. 8.9.11 12 and 13 Other liabilities 8.7.10 Net worth
Assets	Liabilities and net worth

E. Households, Including Private Unincorporated Non-Financial Enterprises

Account 7. Revaluation account

7.10.1 Fixed assets 7.10.2 Stocks 7.10.3 Consumer durables 7.11.1 Land 7.11.2 Forests and plantations 7.11.3 Subsoil assets 7.11.4 Water installations and fisheries 7.12.0 Non-financial intangible assets 7.8.1 Gold 7.8.5 Bonds, long-term 7.8.6 Corporate equity securities, including capital participations 7.8.9 Net equity of households on life insurance reserves and on pension funds 7.8.10 Net equity in quasi-corporate private enterprises	
7.13.1 Revaluations due to price changes	
7.10.1 Fixed assets 7.10.3 Consumer durables	
7.13.2 Revaluations due to adjustments	
7.10.1 Fixed assets (livestock) 7.10.3 Consumer durables (expenditure) 7.11.2 Forests and plantations 7.11.3 Subsoil assets 7.11.4 Fisheries 7.12.0 Non-financial intangible assets	
7.13.3 Revaluations due to other net increases in value	
	7.7.10 Net worth
Total revaluations of assets	Total revaluations of liabilities and net worth

E. (continued) Households, Including Private Unincorporated Non-Financial Enterprises

Account 8. Closing balance sheet

Assets		Liabilities and net worth	
8.10.1	Fixed assets	8.9.7	Short-term loans n.e.c.
8.10.2	Stocks	8.9.8	Long-term loans n.e.c.
8.10.3	Consumer durables	8.9.11	Trade credit and advances
	1. Furniture, fixtures etc.		i. Consumer debt
	2. Major household appliances		ii. Business debt
	3. Personal transport equipment	8.9.12 and 13	Other liabilities
	4. Other consumer durables	8.7.10	Net worth
8.11.1	Land		
8.11.2	Forests and plantations		
8.11.3	Subsoil assets		
8.11.4	Water installations and fisheries		
8.12.0	Non-financial intangible assets		
8.8.1	Gold		
8.8.2	Currency and transferable deposits		
8.8.3	Other deposits		
8.8.4	Bills and bonds, short-term		
8.8.5	Bonds, long-term		
8.8.6	Corporate equity securities, including capital participations		
8.8.7 and 8	Loans n.e.c.		
8.8.9	Net equity of households on life insurance reserves and on pension funds		
8.8.10	Net equity in quasi-corporate enterprises		
8.8.11	Trade credit and advances		
8.8.12 and 13	Other financial assets		

Notes to the Accounts VII

a. Entries in the standard accounts

5.16 The entries shown in the standard accounts for the Revaluation accounts and Balance sheets are those thought most likely to occur in practice; they follow those of the Capital finance accounts closely. Several entries group various items under an omnibus heading (e.g. other financial assets); this grouping is only for the display in the standard accounts, and does not imply that information about the separate items should not be collected.

5.17 No allowance has been made for the following factors in selecting the entries for the Revaluation accounts. Additional entries may therefore be necessary.

(i) Revaluations due to changes in exchange rates

(ii) The use of the category "adjustments" for differences between estimated revaluations for a previous period and the actual revaluations established from later information (see paragraph 3.46).

b. Memorandum items

5.18 Useful information would be conveyed by memorandum items in the following three cases:

(i) In the Revaluation account, major revaluations which arise from changes in foreign currency exchange rates should be detailed under the separate asset and liability headings.

(ii) In the Balance sheet, the nominal (face) value of those liabilities which are carried at market value should be indicated.

(iii) In the Balance sheet for households, including private unincorporated non-financial enterprises, the following three alternative valuations of net equity of households on life insurance reserves and on pension funds should be indicated. (a) sums assured under claims payable on maturity or on death, (b) future annuities and (c) surrender value. Care should be taken to include a surrender value only for those policies which can in fact be surrendered.

Annex V.3 Supporting and supplementary tables

List of standard tables and notes

Table 29. Opening and closing stocks, net accumulation and revaluations of non-financial assets[1/]

Code	Type of asset	Opening stock			During year				Closing stock		
		Original cost	Accumulated revaluations	Current values	Net accumulation [2/]	Revaluations			Original cost	Accumulated revaluations	Current value
						Price changes	Adjustments	Other net increases			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
10.1 1 10.1 2 10.1 3 10.1.4 10.1.5.1 10.1.5 2 10.1.6	Residential buildings Non-residential buildings Other construction works Transport equipment Agricultural machinery and equipment Other machinery and equipment Livestock										
10.1	Reproducible fixed tangible assets										
10 3.1 10 3.2 10 3 3 10 3 4	Furniture, fixtures, etc Major household appliances Personal transport equipment Other										
10.3	Consumer durables										
10.4	Military durables										
10.2.1 10.2.2 10.2.3 10.2.4	Goods producing industries Wholesale and retail trade Other industries Stocks of government services										
10.2	Stocks										
11 1 11 2 11.3 11 4	Land Forests and plantations Subsoil assets Water installations and fisheries										
11 0	Non-reproducible tangible assets										
12 1 12 2	Patents, trade marks and copyrights Other										
12 0	Non-financial intangible assets										

1/ A separate table is required for each institutional sector, specifying only those items that are relevant.

2/ Net accumulation covers all relevant entries on the capital finance account, i.e. gross fixed capital formation less consumption of fixed capital, increase in stocks, net purchases of land and of intangible assets.

Table 30. Opening and closing stocks, net acquisitions, net incurrence and revaluations of financial assets and liabilities[1/]

Assets								Type of asset/liability[2/]	Liabilities							
Opening stock			During year		Closing stock				Opening stock			During year		Closing stock		
Cost of acquisition	Accumulated revaluations	Current value	Net acquisitions	Revaluations	Cost of acquisition	Accumulated revaluations	Current value	Item	Nominal (face) value	Accumulated revaluations	Current value	Net incurrence	Revaluations	Nominal (face) value	Accumulated revaluations	Current value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
								1 Gold								
								2 Currency and transferable deposits								
								3 Other deposits								
								4 Bills and bonds, short-term								
								5 Bonds, long-term								
								6 Corporate equity securities, including capital participations								
								7 Short-term loans n.e.c.								
								8 Long-term loans n.e.c.								
								9 Net equity of households on life insurance reserves and on pension funds								
								10 Net equity in quasi-corporate enterprises								
								11 Trade credit and advances								
								12 Other accounts receivable and payable								
								13 Other								
								Total								

1/ Separate tables are required for each institutional sector and for each sub-sector of the financial institutions sector.

2/ The detail in which the claims are shown should be adapted to the institutional sector or sub-sector to which the table refers. Further detail than is shown may be specified as required. Table 24 in Annex 8.3 of A System of National Accounts provides an example.

Table 31. Financial claims outstanding analysed by the sub-sectors[1/] of which they are assets and liabilities

Financial assets of:											Total	Type of claim [1/]	Liabilities of
			General government			Financial institutions				Non-financial corporate and quasi-corporate enterprises			
The rest of the world	Households	Private non-profit institutions serving households	Social security funds	State and local government	Central government	Other financial institutions	Insurance companies and pension funds	Other monetary institutions	Central bank				
(12)	(11)	(10)	(9)	(8)	(7)	(6)	(5)	(4)	(3)	(2)	(1)	Item	Column 1 through 12 in respect of financial assets
a. All (national and foreign) financial assets and liabilities													
												1 Gold 2 Currency and transferable deposits 3 Other deposits 4 Bills and bonds, short-term 5 Bonds, long-term 6 Corporate equity securities, including capital participations 7 Short-term loans n.e.c. 8 Long-term loans n.e.c. 9 Net equity of households on life insurance reserves and on pension funds 10 Net equity in quasi-corporate enterprises 11 Trade credit and advances 12 Other accounts receivable and payable 13 Other	
												Total	
b Foreign financial assets and liabilities													
												1 Gold 2-4 Currency deposits and short-term bills and bonds i International reserves or offsets ii. Other claims 5-13 Other financial assets or liabilities i International reserves or offsets ii. Other claims	

1/ Further detail of sub-sector or of debtor or creditor may be specified as in Table 24 in Annex 8 3 of A System of National Accounts.

ANNEX. LIST OF WORKS CITED

1. BAIN, H. Foster, et al., "Subsoil wealth", Studies in Income and Wealth, Vol. 12, National Bureau of Economic Research

2. BARNA, T., "The replacement cost of fixed assets in British manufacturing industry in 1955", Journal of the Royal Statistical Society, Series A, Vol. 120, Part 1

3. GOLDSMITH, Raymond W., The National Wealth of the United States in the Postwar Period, National Bureau of Economic Research

4. GOLDSMITH, Raymond W., et al., Studies in the National Balance Sheets of the United States, 2 vols., National Bureau of Economic Research

5. REVELL, Jack, The Wealth of the Nation. the National Balance Sheet of the United Kingdom 1957-1961, Cambridge University Press

6. Measuring the Nation 's Wealth, Studies in Income and Wealth, Vol. 29, National Bureau of Economic Research