IMF Committee on Balance of Payments Statistics

BPM6/2008 SNA Update
Joint Financial and Payments Systems Task Team (FITT)

Inter-secretariat Working Group on National Accounts

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F.9 Valuation of Loans (Fair Value)

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Valuation of loans at nominal value could be seen as a deviation from the general principle of market valuation recommended in the sixth edition of the Balance of Payments and International Investment Position Manual (BPM6) *and the* System of National Accounts 2008 (2008 SNA)*. This guidance note recommends maintaining the current nominal valuation principle for loans, and strengthening the existing framework allowing for value reset even beyond cases of bankruptcy and liquidation, when there is public evidence of loan deterioration.*

SECTION I: THE ISSUE

BACKGROUND AND CURRENT STATISTICAL STANDARDS

1. **In the *System of National Accounts 2008* (*2008 SNA*), the sixth edition of the *Balance of Payments and International Investment Position Manual* (*BPM6*), and the *Monetary and Financial Statistics Manual and Compilation Guide* (*MFSMCG*), loans are valued at the amount that the debtor must pay to extinguish the claim, that is nominal value.** Valuation of loans at nominal value is linked to the fact that claims classified as loans are not intended for trading in an organized market and therefore lack generally available market values. However, in principle, absence of regular market observations does not prevent from valuing assets "as if" they were being acquired on the date to which the balance sheet relates (*2008 SNA*, paragraph 3.16; *BPM6,* paragraph 3.84). This might be achieved by reference to the present value of future cash flows or other methods, as in the case of unlisted equity or infrequently traded debt securities. The values of loans to be recorded in the balance sheets of both creditors and debtors are the amounts of principal outstanding at the reporting date. This amount "should also include any interest that has been earned but not been paid" (*2008 SNA*, paragraph 13.62).

2. **Nominal value as defined in *BPM6* repeats the same treatment (paragraph 3.86) and defines the nominal value (paragraph 3.88.b) as referring** "to the outstanding amount the debtor owes to the creditor, which is composed of the outstanding principal amount including any accrued interest. So, the nominal value reflects the sum of funds originally advanced, plus any subsequent advances, plus any interest that has accrued, less any repayments (which includes any payments covering interest accrual)." This point has been further discussed in the guidance note (GN) F.8 "Valuation of Debt Securities at Both Market and Nominal Value", where it is suggested that the same definition be clearly adopted in SNA and that clarification on its calculation be included in line with the 2013 *External Debt Statistics: Guide for Compilers and Users* (*EDS Guide*), paragraph 2.34 ("the nominal can be calculated by discounting future interest and principal payments at the existing contractual interest rate"; more precisely—at the interest rate at inception).

3. **This definition of nominal value could be interpreted as a measure of value from the viewpoint of the debtor because it does not change in time, regardless of changes in the probability of repayment,** and it is established by reference to the terms of a contract between the

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debtor and creditor. By contrast, alternative definitions (e.g., fair value or loss-adjusted value) could be interpreted as measures of value from the viewpoint of the creditor.

4. **As explained in *BPM6*, paragraph 3.86, and *MFSMCG,* paragraph 5.123, the use of nominal values for loans is partly influenced by pragmatic concerns about data availability and the need to maintain symmetry between debtors and creditors.** In addition, because loans are not intended for negotiability, without an active market, estimating a market price can be somewhat subjective. Another advantage of nominal value is that it remains unaffected when repayment becomes uncertain (i.e., because of credit risk), thus preventing what could be understood as an underestimation of debt and artificial improvement of the debtor's net worth, in case of decreased creditworthiness. With respect to the latter point, the *2008 SNA* shows clear awareness of the issue of nonperforming loans (NPLs), providing a definition based on interest or principal payment delay exceeding 90 days, or other indications including a debtor filing for bankruptcy, and foreseeing the introduction of related memorandum items.[2]

5. **Fair value is then introduced by the *2008 SNA* as the closest approximation to market equivalent value to be used for the memorandum items.** However, for loans in the core accounts (NPLs included), only nominal value must be recorded in the accounts of creditors and debtors. The *BPM6* is based on the same principles and foresees the same treatment: nominal values in core accounts and disclosure of NPLs as supplementary information.[3] In line with the *2008 SNA*, the *MFSMCG* also recommends that NPLs should continue to be recorded at nominal value. The NPLs should remain classified as loans (thus valued at nominal value) even if sold at a small fraction of nominal value (*MFSMCG,* paragraph 4.101).

6. **The *MFSMCG* provides the closest framework with those of the International Accounting Standards (IAS) and the International Financial Reporting Standards (IFRS), recording loan loss provisions in the core accounts as a liability.** However, the *MFSMCG* framework still retains the broad consistency with the existing SNA and BPM frameworks. In fact, the *MFSMCG* recording impacts the split of liabilities between equity and other accounts payable (loan loss provisions are included in other accounts payable). However, the measurement of loans on the asset side remains the same as in the *2008 SNA* and the *BPM6*, regardless of provisioning (*MFSMCG,* paragraph 5.126), as well as the net worth, that is not impacted.

7. **The market value for loans is recognized only in the valuation of flows (transactions), that records the amount actually paid, when a loan is sold at below (above) nominal value.** Nevertheless, before and after the transaction, stocks remain valued at nominal value. To reconcile the

[2] The need to provide information on NPLs is addressed by foreseeing two memorandum items: the nominal value of NPLs (i.e., an "of-which" of the overall loans at SNA valuation) and its "market equivalent" (also see GN F.6 "Nonbank Financial Intermediation" for an inclusion of NPL within the standard list of financial instruments). A benefit of these memorandum items is the ability to derive, by comparison of the two memorandum items, a sort of proxy for the degree of impairment of the involved NPL. The two memorandum items should be standard components at least for the government and the financial corporations sector. If they are significant for cross-border loans or for other sectors, they should be shown as supplementary items. The *MFSMCG*, in turn, recommends compiling memorandum items on expected loan losses for financial corporations, disaggregated by economic sector of debtor (paragraph 5.142), so that the so-called realizable values of loans can be calculated based on the reported gross amounts of loans and expected loan losses (paragraphs 2.63 and 5.148).

[3] It further records entries in the amount of the provisions for loan losses in Other accounts payable-other (*MFSMCG*, paragraph 5.231), which is not the case in the SNA, as SNA does not recognize loan loss provisions.

difference between the market valuation of transactions and nominal valuation of positions, the seller records other price changes in assets during the period in which the sale occurs, equal to the difference between the nominal and the transaction value and the buyer records an "opposite amount as other price changes" (*BPM6*, paragraph 9.33). Since changes are opposite (one increase and one reduction), they would neutralize each other, leaving the stock of loans unchanged. The same reconciliation is foreseen in the *MFSMCG*, paragraph 5.128, via "opposite revaluations" between the buyer and the seller.[4] The rest of this GN will focus on stocks only.

8. **This topic should be seen in relationship with the more general issue of valuation of other Investment instruments in external sector statistics, and to the related issue discussed in the GN F.8 "Valuation of Debt Securities at Both Market and Nominal Value".** It is also related to the GN F.15 "Debt Concessionality", which extensively discusses the valuation of concessional loans. In principle, the same discussion applies to deposits and other nonnegotiable instruments. However, this GN is focused on loans reflecting some practical aspects discussed in the following sections.

CONCERN IN THE CURRENT STANDARDS AND REASONS TO CONSIDER CHANGES

9. **One of the reasons for reopening a topic discussed several times in the past is the new evidence that became available after the last update of the statistical standards.** The review process leading to the *2008 SNA* was completed before the outbreak of the 2008 great financial crisis and subsequent long-term effects. Therefore, some of the issues highlighted by the crisis, as well as some measures adopted as a response, including their recording, could not be taken into account.

10. **For example, in the context of financial rescue interventions in favor of the banking sector, the government often transfers financial assets and acquires existing loans (e.g., through a troubled public bank).** A common practice of financial rescue is based on the creation by government of specific units to assume NPLs (or other high-risk illiquid assets), removing them from parent banks' balance sheets. For these kind of loans, nominal valuation would blur the economic representation of government exposure. By contrast, valuation of loans at market value—in line with all other involved assets—would allow imbalances to emerge, also through the impact on the government net worth.

11. **In recent years, traditional preferences for preventing underestimation of debt (see paragraph 4 above) have been increasingly challenged by the need to also avoid optimistic views on the creditor side.** Sensitivity to issues of financial stability pointed out the need to avoid overstating the asset side of the financial sector's balance sheets. Information reported in the form of memorandum items is useful but cannot fully substitute for consistent entries in the system of core accounts. In addition, the inclusion of loan valuation in the *2008 SNA* research agenda (paragraph A4.40) signaled the need to revisit the current guidance.

12. **The reasons why memorandum items cannot fully substitute the adequate entries in the core accounts also refer to their non-reflection in the main indicators.** In the system of national accounts, as well as in the *Government Finance Statistics Manual 2014 (GFSM 2014)*, a key role of providing summary information on the overall situation of government and other sectors is played by the main balancing items, which include the net lending/net borrowing figure and the change in net worth.

[4] A numerical example with opposite revaluations is in the *Handbook on National Accounting—Financial Production, Flows and Stocks in the System of National Accounts* (*HNAFP*), paragraphs 4.129–4.133 (Worked Example 4.1).

While the former is preserved under the current rules, the latter may be considerably distorted by valuation rules deviating from the general market criteria. Other reasons include unnecessary deviations from available business accounting data (IFRS as well as International Public Sector Accounting Standards (IPSAS)) where such deviations are not dictated by the statistical principles.

13. **On the other hand, the debate on possible revisions of the current rules should take into account arguments raised in the past suggesting keeping the current valuation.** One of the most recurring arguments in favor of nominal valuation of loans is the need to maintain consistency with the amounts reflected in the debtor accounts according with standard business accounting rules. Until the liquidation of an enterprise or agreement with the creditor, the debtor continues recording the full amount on its balance sheet. Apart from write-offs and write-downs, without an active market there is also an issue of difference in estimating market conditions by creditor and debtor for calculating fair values. Each party can calculate fair value and related flows subjectively, using its own judgments which (even though less significant at inception) may differ over time. Thus, the nominal value is seen as the easiest alternative to achieve symmetry between debtor and creditor records.

ISSUES FOR DISCUSSION: MERITS AND SHORTCOMINGS OF THE ALTERNATIVE OPTIONS

14. **The following two options are considered, each proposing two variants.**

Option 1—Maintaining the Current Nominal Valuation

- **Option 1a**—Do not change the current valuation of loans and leave in the updated SNA and BPM the provisions recommending that loans be recorded in the balance sheets of both creditors and debtors at nominal value.
- **Option 1b**—Retain the recommendation to measure loans at nominal value and improve and clarify the updated SNA and BPM guidance within the limits of the existing framework, allowing for value reset even beyond cases of bankruptcy and liquidation, when there is public evidence of loan deterioration.

Option 2—Shifting to Fair Valuation

- **Option 2a**—Change the existing valuation rules in the updated SNA and BPM, shifting to a simplified estimate for fair value, based on nominal value less expected loan losses.
- **Option 2b**—Change the existing valuation rules in the updated SNA and BPM, shifting to full fair valuation at any time for all loans in the core accounts.

Option 1a: Do Not Change the Current Valuation of Loans

15. **Under this option, the use of fair value remains limited to memorandum items and NPLs.** Some minor changes in the updated SNA might still be required under this option, for simple reasons of consistency with other guidance, (e.g., on debt securities discussed in the GN F.8 “Valuation of Debt Securities at Both Market and Nominal Value”) and the *European System of Accounts (ESA 2010).*

16. **The main advantage of this option is that it prevents artificial improvements in the debtor's net worth in case of decreased creditworthiness.** In addition, it is in line with the opportunity cost of the instrument. For assets that are not traded, both debtor and creditor are “locked in,” with no opportunity

to rebalance. They cannot sell and replace with an alternative, unless they re-negotiate. This justifies using nominal value—the amount the debtor must pay the creditor to extinguish the claim—as long as the loan remains not tradable. The main problem is overstating the asset side valuation of financial sector's balance sheets, providing a somewhat distorted view of the financial position. Although the best estimate for use of fair value is reflected in memorandum items, statisticians and users will continue to put less emphasis on them until stricter guidance is adopted.

Option 1b: Improving the Existing Framework

17. **As mentioned in Section I, the *MFSMCG* provides the closest framework with those of the IAS and IFRS, while retaining the broad consistency with the existing SNA and BPM frameworks.** Nevertheless, "it is recognized that nominal value provides an incomplete view of the financial position, particularly when some loans are nonperforming" (*MFSMCG*, paragraph 5.123). This issue cannot be solved by means of memorandum items, though the need for a market valuation drives statistics to include additional data requirements in memorandum items (see GN B.7 for additional data on arears in international investment position (IIP)). An approach to correct this inconsistency in financial positions exists within the current standards, but it is limited to very few cases. In the absence of specific transactions (e.g., forgiveness or restructuring, apart from normal repayment) a value reset as recognized by the creditor is allowed in case of bankruptcy, liquidation, or other factors (*2008 SNA*, paragraph 12.40). The "other factors" are not described in the *2008 SNA*. An example of other factors is provided in *BPM6* and *GFSM 2014*, which both mention the same case: a court order (*GFSM 2014,* paragraph 10.57; *BPM6,* paragraph 9.9). The other changes in assets involved in these three cases are not opposite and do not neutralize each other: the same reduction is recorded in the balance sheet of the creditor and debtor (*2008 SNA,* paragraph 12.40). The solution proposed under Option 1b is to improve the existing guidance by extending the possibility of resetting loan values beyond cases of bankruptcy, liquidation, and court decisions.

18. **Under Option 1b, loan reset could be extended to cases of reassessment of loans by a formal, publicly known process (e.g., in the context of bank recovery operations), imposing on shareholders to absorb a corresponding loss.** Evidence of deterioration resulting from specific transactions at deep discount or extraordinary events should also be covered. This would be mainly achieved by extending the section on other changes in assets—Debt Operations in *2008 SNA* (paragraphs 12.38–12.42), and corresponding parts in the other manuals. This extended guidance should include a clear description of other cases leading to a permanent reduction in the loan value, as well as a clear separation from cases to be still managed via opposite revaluations, not impacting the closing balance sheets.

19. **Under Option 1b, the loans would still be recorded at nominal value, and standard provisioning would not affect balance sheets.** Continuous revaluations of loans depending on expected losses as well as because of changes in market conditions (interest rates) would thus not be carried out. However, a shift to the creditor view would take place, with a clear guidance as to when the value of the loans would be reduced, in an increased number of cases.

20. **The main advantage of this option is somewhat improving measurement of financial positions, notably for fiscal and financial stability analysis, and minimizing the burden of changes.** As a main drawback, it does not achieve a full alignment with the general market valuation principle (*2008 SNA*, paragraph 2.60). In addition, memorandum items on fair value should be retained.

Options 2a and 2b: Changing the Existing Framework

21. **Option 2a and Option 2b propose changing the existing valuation rules in the updated SNA and BPM, shifting to fair valuation for all loans in the core accounts.** The *2008 SNA* defines fair value as the amount that approximates the value that would arise from a market transaction between two parties. *"Fair value can be established using transactions in comparable instruments, or using the discounted present value of cash flows, or may sometimes be available from the balance sheets of the creditor"* (*2008 SNA*, paragraph 13.67). Those three alternative methods are complemented by a fourth, simplified possibility (i.e., Option 2a), regarded as sub-optimal but still allowed for memorandum items: *"In the absence of fair value data, the memorandum item will have to use a second-best approach and show nominal value less expected loan losses."* The first two options for fair value have been later complemented by extensive guidance in the *MFSMCG* (paragraphs 5.44–5.49), which also discusses differences with historic cost and amortized, face, and book value. Having four available alternatives for fair value is an advantage facilitating compilation, in the context of memorandum items. This is no longer an advantage in the case of core accounts. One of the main differences between memorandum and core accounts is the need for horizontal consistency: in order to introduce fair valuation in the core accounts, additional rules are needed to make sure that the treatment is consistent between counterparties.

22. **As the pure fair value, the simplified (written down) value in Option 2a takes continuously into account changes in value arising from impairment, and loans should be revalued even if not traded.** Option 2a and Option 2b differ by the discount rate used (initial/at inception instead of current). The difference between these two options and Option 1b (nominal adjusted for extraordinary events) is in the regular use of provisions for impaired loans, implying revaluations of loans even in the absence of transactions. In Option 1b, loan values are revised only in cases of extraordinary events or formal procedures. This variant is less radical than the fair valuation of all loans and might be easier to apply. Data on aggregate loan loss provisions are generally available; their breakdown by counterpart—not always available—is also needed for most datasets. However, this latter is part of the memorandum items recommended by the *MFSMCG* (paragraph 5.142).

23. **In case Option 2b is adopted in the revised standards, with full shift to fair valuation in the core accounts, new memorandum items should be introduced to present the nominal values of loans, as would be the case for debt securities.** The core problem here is achieving cross-country consistency that affects the quadruple entry system when creditor records do not match those of debtors. Use of nominal values as memorandum items can help to partially solve the problem of inconsistency between positions reported by creditors and debtors.

24. **Fair valuation should account for changes due to both market rates and impairment of loans.** The current or expected rate to be used for discounting future flows may differ from the contractual/inception rate (see *MFSMCG*, Box 5.1) and is subject to change over time, as well as measures for impairment. Such changes should be recorded in the revaluation account and reflected in the IIP. In contrast to the current nominal valuation, which does not record price changes, fair valuation would lead to more reliable estimate of net worth and positions. This can cause several issues for the IIP and financial accounts (national accounts and balance of payments). On the other hand, this may also have practical advantages over nominal values in terms of connection to real business practice, facilitating use of available information, and reducing reporting burden.

25. **The basic sources for applying fair valuation to loans under Option 2b are in the *2008 SNA*, the *BPM6,* and other manuals mentioned above, describing alternative methods to compile supplementary data and memorandum items at fair value.** Additional work would be however required to explain how to reconcile the asset and liability side, where different methods are adopted. The creditor view provides a strategy easier to be followed when both counterparties are resident, and a choice of sources is available to the statistical compilers. Specific guidance should be developed for transactions between residents and nonresidents, where information might be available on the one side only.

26. **The main advantages of Option 2b include full consistency with the general principle of market valuation in the SNA and BPM and better reconciliation with available business accounting data.** While not mandatory for national accountants, alignment with IPSAS 41 and IFRS 9 would allow to make use of extensive guidance already applied worldwide by preparers of public and private financial statements. Elimination of an unnecessary differences between financial reporting and statistical reporting would benefit users of both types of accounting frameworks in terms of relevance, understandability, and comparability. On the downside, it might cause inconsistencies, notably at the cross-country level, and would imply significant statistical burden of changing the current practice.

Symmetry Between Debtors and Creditors

27. **The need for symmetry is a fundamental principle on which some of the traditional arguments in favor of the current loan valuation have been based (*BPM6,* paragraphs 3.122–3.125).** In fact, the system of the accounts requires to record the same value in the accounts of the debtor and the creditor. In addition, in the national account domain it has priority over other needs, including financial stability analysis. Nominal valuation has an advantage in this respect, being independent of the potentially different estimates made by the two parties. However, the other possible solution often adopted in the *2008 SNA* is just to impose the view of one sector to another. An example is provided by the treatment of write-offs, that do not need to be known to the debtor. In this case, the *2008 SNA* imposes the creditor viewpoint, by requesting that the corresponding liability be removed from the balance sheet of the debtor, "to maintain balance in the accounts of the total economy" (*2008 SNA* paragraph 12.40). Other examples are provided in paragraph 7.127 and Table 7.3 of the *HNAFP.*

28. **Addressing the issue of loan symmetry via the creditor viewpoint should be seen as a point in common for Option 1b, Option 2a, and Option 2b.** The creditor view itself does not require any change in the existing rules. However, to properly ensure consistent recording, some clarification would be beneficial. Extension of write-offs beyond simple cases (bankruptcy, liquidation, and court orders) would pave the way to the issue of loan recoveries potentially exceeding the amount recorded in the balance sheet. While the *2008 SNA* and *BPM6* do not cover this issue, guidance fully in line with the creditor viewpoint could be based on the *MFSCG* (paragraph 5.231). It develops the concept of *write-off reversal*, allowing for reconciliation with previous provisions and between counterparties, without issues of asymmetry.

SECTION II: OUTCOMES

29. **Based on considerations explained below, this GN rejects Option 2a and Option 2b; and favors Option 1b.** One of the co-authors is in favor of Option 2a—nominal value less expected losses or written down value.

30. **Several co-authors stressed practical difficulties associated with a full market valuation approach.** The loan portfolio for the public sector was also mentioned as a source of possible issues. On the other hand, it was noted that financial stability assessors in various countries rely heavily on institutional sector account statistics, and there should be some gauge of the NPL component. It was also confirmed that often it is not easy to relate the core accounts to the memorandum items consistently.

31. **Furthermore, while theoretically the symmetry can be achieved in national accounts statistics if compilers have access to both creditor and debtor data, such exercise is unlikely to be performed for cross-border loans.** Strict limitations apply not only to individual data access by a compiler to the partner country data but also there are limitations for compiling and sharing data even on aggregate level. National compilers also will have to compile loans data with country breakdowns at some disaggregated level and provide these data to partner countries to achieve cross-country consistency.

32. **Other comments from co-authors and FITT members noted that positions in deposits and accounts receivable/payable are also recorded at nominal value, and they give rise to the same issues of nominal and fair valuation as loans (*BPM6*, paragraph 3.87).** Consequently, Option 2b would also open the discussion of fair valuation of these instruments in addition to loans. A possible answer is that, for deposits, "sales at a fraction of nominal value" are not common, as well as provisions for losses. Therefore, the impact of valuation should be less significant. However, the same criteria should be adopted for all financial instruments; therefore, any option other than status-quo (Option 1a) should lead to corresponding changes for other instruments. By the same line of reasoning, it should be added that Option 2b might look more radical than it is, having significant effects limited to a specific subset of loans.

33. **A recurring point in comments on Option 1b is about defining or clarifying the "other factors" leading to a loan reset (extending what is already in the *2008 SNA*).** Ideally, they should be clearly indicated, based on "objective/factual" evidence, in order to aim at exhaustive clarity and minimize uncertainty allowed in the guidelines. The relevant parameters and conditionality should be made as clear as possible.

Overall, the majority of FITT members supported maintaining nominal valuation of loans, either with no changes, or in the extended version adjusted for extraordinary events, as long as the conditions for a loan reset can be tightly defined and limited in scope. While Option 1b is strictly limited to extraordinary and publicly known events, an extended variant including any transfer of loans was also discussed. In this version, loans transferred should then be measured at transaction value, generally available (for countries in the European Union, this measure is available from the mandatory reporting). However, this alternative did not receive enough support by FITT members and thus is not proposed/covered in this GN.

OUTCOMES OF THE DISCUSSIONS AT JOINT COMMITTEE AND AEG MEETING[5]

34. **Members of the IMF Committee on Balance of Payments Statistics and the Advisory Expert Group on National Account overwhelmingly supported the valuation of loans at nominal value (Option 1) over valuation at fair value (Option 2).** Members supporting Option 1 noted that nominal valuation maintains symmetry between debtors and creditors and considered that fair value provides a one-sided assessment of the risk associated with loan repayment. Option 1 was also preferred for pragmatic reasons and data availability considerations. A large majority of these members were in favor of extending the situations in which the loan value should be reset (Option 1b), acknowledging the need for some improvements in the framework for nominal valuation to account for public announcements where nominal valuation clearly provides an unrealistic value for loans.

35. **While some members considered that the relevant information on publicly known cases should be observable for both sides to ensure the symmetry of recording, there were suggestions to provide practical guidance in the updated compilation guides.** They proposed that compilation guides such as the updated *BPM6 Compilation Guide* should include clear guidance on the situations when values should be reset and the criteria to be applied for resetting. Other members also underlined the need for assessing the impact of this option on interest accrued and the financial intermediation services indirectly measured (FISIM).

[5] The recommendations outlined in this GN were approved by the Committee and the AEG in the October 2021 meeting and the *Summary of Discussions* of this meeting can be accessed here.

Annex I. Supplementary Information

SYSTEM OF NATIONAL ACCOUNTS 2008 (2008 SNA)

The parts more relevant to the purpose of the note are in Chapter 13 (The Balance Sheets), that covers valuation criteria and the NPL case, and in Chapter 12 (The other changes in assets accounts), that includes a specific section devoted to Debt Operations, listing circumstances other than normal repayment that may lead to changes in the balance sheets. The general principle in paragraph 2.60 should be also recalled.

Paragraph 2.60 Assets and liabilities are recorded at current values at the time to which the balance sheet relates, not at their original valuation. Theoretically, national accounts are based on the assumption that the values of assets and liabilities are continuously uprated to current values, even if in fact uprating occurs only periodically. The appropriate valuation basis for assets and liabilities is the value at which they might be bought in markets at the time the valuation is required. Ideally, values observed in markets or estimated from observed market values should be used. When this is not possible, current values may be approximated for balance sheet valuation in two other ways, by accumulating and revaluing transactions over time or by estimating the discounted present value of future returns expected from a given asset (see also Chapter 13).

GENERAL VALUATION PRINCIPLES

Paragraph 13.16 For the balance sheets to be consistent with the accumulation accounts of the SNA, every item in the balance sheet should be valued as if it were being acquired on the date to which the balance sheet relates. This implies that when they are exchanged on a market, assets and liabilities are to be valued using a set of prices that are current on the date to which the balance sheet relates and that refer to specific assets. In the case of nonfinancial assets, other than land, the value includes any associated costs of ownership transfer. Financial claims that are not traded on organized financial markets are valued at the amount the debtor must pay to the creditor to extinguish the claim.

Paragraph 13.18 Ideally, observable market prices should be used to value all assets and liabilities in a balance sheet. However, in estimating the current market price for balance sheet valuation, a price averaged over all transactions in a market can be used if the market is one on which the items in question are regularly, actively, and freely traded. When there are no observable prices because the items in question have not been purchased or sold on the market in the recent past, an attempt has to be made to estimate what the prices would be were the assets to be acquired on the market on the date to which the balance sheet relates.

Paragraph 13.19 In addition to values observed in markets or estimated from observed prices, values may be approximated for balance sheet valuation in two other ways. In some cases, values may be approximated by accumulating and revaluing acquisitions less disposals of the type of asset in question over its lifetime and adjusted for changes such as consumption of fixed capital; this generally is the most practical and also the preferred method for fixed assets, but it can be applied to other assets as well. In other cases, values may be approximated by the present, or discounted, value of future economic benefits expected from a given asset; this is the case for a number of financial assets, natural resources and even for fixed assets. With good information and efficient markets, the values of the assets obtained

by accumulating and revaluing transactions should equal, or at least approximate, both the present, or discounted, value of the remaining future benefits to be derived from them and their market values when active second-hand markets exist. These three price bases are discussed below in general terms.

FINANCIAL ASSETS

Paragraph 13.54 In line with the general valuation principles described above, whenever financial assets and liabilities are regularly traded on organized financial markets, they should be valued at current prices. Financial claims that are not traded on organized financial markets should be valued by the amount that a debtor must pay to the creditor to extinguish the claim. Financial claims should be assigned the same value in the balance sheets whether they appear as assets or liabilities. The prices should exclude service charges, fees, commissions, and similar payments for services provided in carrying out the transactions. There is more detailed discussion on the definition of financial assets and their recording in Chapter 11 and part 4 of Chapter 17.

LOANS

Paragraph 13.62 The values of loans to be recorded in the balance sheets of both creditors and debtors are the amounts of principal outstanding. This amount should include any interest that has been earned but not been paid. It should also include any amount of indirectly measured service charge (the difference between bank interest and SNA interest) due on the loan that has accrued and not been paid. In some instances, accrued interest may be shown under accounts receivable or payable but inclusion in loans is to be preferred if possible.

Paragraph 13.63 The value of a loan does not reflect the consequences of any interest payments due after the date of the balance sheet, even if these were specified in the original loan agreement.

Paragraph 13.64 If there is evidence of a secondary market for a loan, and frequent market quotations are available, the loan is reclassified as a security. A loan that is traded once only and for which there is no evidence of a continuing market is not reclassified but continues to be treated as a loan. The valuation rules for debt securities and loans then apply.

Paragraph 13.65 Loans where the principal is index-linked, or both principal and interest are indexed to a foreign currency, should be treated in the manner described above for debt securities with these characteristics.

NONPERFORMING LOANS

Paragraph 13.66 Despite the fact that loans are to be recorded in the balance sheets at nominal values, certain loans that have not been serviced for some time should be identified and memorandum items concerning them should be included in the balance sheet of the creditor. These loans are termed nonperforming loans. A common definition of such a loan is as follows. ***A loan is nonperforming when payments of interest or principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons (such as a debtor filing for bankruptcy) to doubt that payments will be made in full.*** This definition of a nonperforming loan is to be interpreted flexibly, taking into account national conventions on when a loan is deemed to be nonperforming. Once a

loan is classified as nonperforming, it (or any replacement loans) should remain classified as such until payments are received, or the principal is written off on this or subsequent loans that replace the original.

Paragraph 13.67 Two memorandum items are recommended relating to nonperforming loans. The first is the nominal value of the loans so designated, including any accrued interest and service charge. The second is the market equivalent value of these loans. The closest approximation to market equivalent value is fair value, which is "the value that approximates the value that would arise from a market transaction between two parties". Fair value can be established using transactions in comparable instruments, or using the discounted present value of cash flows, or may sometimes be available from the balance sheets of the creditor. In the absence of fair value data, the memorandum item will have to use a second-best approach and show nominal value less expected loan losses.

Paragraph 13.68 These memorandum items should be standard for both the government sector and the financial corporations sector. If they are significant for other sectors, or for loans with the rest of the world, they should be shown as supplementary items.

OTHER CHANGES IN ASSETS CONCERNING DEBT OPERATIONS

Paragraph 12.38 There are a number of circumstances that may lead to reduction or cancellation of debt by other than normal repayment of liabilities. The most common instances are described below.

Paragraph 12.39 A debtor and creditor may become parties to a bilateral agreement (often referred to as "debt forgiveness") that a financial claim no longer exists. Such an agreement gives rise in the SNA to the recording of a capital transfer payable or receivable (recorded in the capital account at the time the debt forgiveness occurs) and the simultaneous extinction of the claim (recorded in the financial account). Debt forgiveness usually concerns government debt. Some taxes and social security contributions that government recognizes as unlikely to be collected from the outset are excluded from tax and social security contribution receipts and so do not appear in the other changes in the volume of assets account.

Paragraph 12.40 Changes in claims resulting from debt assumption or rescheduling should be reflected in the financial account when the terms of the debt contract (maturity, interest rate, etc.) change, or when the institutional sector of the creditor or debtor changes, as these are considered new contractual arrangements. However, all other changes in claims resulting from write-offs and write-downs are excluded from the financial account because there is no mutual agreement between the parties. Specifically, a creditor may recognize that a financial claim can no longer be collected because of bankruptcy, liquidation, or other factors and he may remove the claim from his balance sheet. This recognition (by the creditor) should be accounted for in the other changes in volume of assets account. (The corresponding liability must also be removed from the balance sheet of the debtor to maintain balance in the accounts of the total economy.)

Paragraph 12.41 Most commercial situations where the impossibility of debt collection is recognized are treated as unilateral cancellation of debt. Unilateral cancellation of a financial claim by a debtor (debt repudiation) is not recognized in the SNA. Write-downs that reflect the actual market values of financial assets should be accounted for in the revaluation account. However, changes in value that are imposed solely to meet regulatory, supervisory, or accounting requirements do not reflect the actual market values of those financial assets and should not be recorded in the SNA.

Paragraph 12.42 Another debt-related operation that raises questions as to how it should be recorded in the SNA relates to debt defeasance. Debt defeasance allows a debtor (whose debts are generally in the form of debt securities and loans) to remove certain liabilities from the balance sheet by pairing irrevocably assets of equal value to the liabilities. Subsequent to the defeasance, neither the assets nor the liabilities are included in the balance sheet of the debtor, nor, frequently, need they be reported for statistical purposes. Defeasance may be carried out either by placing the paired assets and liabilities in a trust account within the institutional unit concerned, or by transferring them to another institutional unit. In the former case, no entry is recorded for defeasance and the assets and liabilities will not be excluded from the balance sheet of the unit. In the latter case, the transactions by which the assets and liabilities are moved to the second institutional unit are recorded in the financial account of the units concerned and reported in the balance sheet of the unit that holds the assets and liabilities. Therefore, debt defeasance as such never results in liabilities being removed from the SNA, although it sometimes leads to a change in the institutional unit that reports those liabilities.

BALANCE OF PAYMENTS AND INTERNATIONAL INVESTMENT POSITION MANUAL, SIXTH EDITION (BPM6)

Paragraph 3.67 Market prices refer to current exchange value, that is, the values at which goods and other assets, services, and labors are exchanged or else could be exchanged for cash. Market prices are the basis for valuation in the international accounts.

Paragraph 3.82 For loans, deposits, and other accounts receivable/payable sold at a discount, the transaction values recorded in the financial account may differ from the nominal values recorded in the international investment position. Such differences are recorded as valuation changes in the other changes in financial assets and liabilities account (see also paragraph 9.33).

Paragraph 3.84 Positions of financial assets and liabilities should, in general, be valued as if they were acquired in market transactions on the balance sheet reporting date. Many financial assets are traded in markets on a regular basis and therefore can be valued by directly using the price quotations from these markets. If the financial markets are closed on the balance sheet date, the market prices that should be used in the valuation are those that prevailed on the closest preceding date when the markets were open. Debt securities have a current market value as well as a nominal value, and for some purposes, supplementary data on the nominal values of positions of debt securities may be useful (see paragraph 3.88 for definition of nominal value).

Paragraph 3.85 Valuation according to the market-value equivalent is needed for valuing financial assets and liabilities that are not traded in financial markets or that are traded only infrequently. For these assets and liabilities, it will be necessary to estimate fair values that, in effect, approximate market prices. The present value of future cash flows also may be used as an approximation to market prices, provided an appropriate discount rate can be used.

Paragraph 3.86 Loan positions are recorded at nominal value. The use of nominal values is partly influenced by pragmatic concerns about data availability and the need to maintain symmetry between debtors and creditors. In addition, because loans are not intended for negotiability, without an active market, estimating a market price can be somewhat subjective. Nominal value is also useful because it shows actual legal liability and the starting point of creditor recovery behavior. In some instances, loans

also may be traded, often at discount, or a fair value may exist or would be possible to estimate. It is recognized that nominal value provides an incomplete view of the financial position, particularly when the loans are nonperforming. Therefore, information on the nominal value of nonperforming loans should be included as a memorandum or supplementary item (see paragraph 7.50 for the definition of nonperforming loans). Loans that have become negotiable de facto should be reclassified under debt securities (see paragraph 5.45 for criteria for reclassification).

Paragraph 3.88 (a) Fair value is a market-equivalent value. It is defined as the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. It thus represents an estimate of what could be obtained if the creditor had sold the financial claim.

(b) Nominal value refers to the outstanding amount the debtor owes to the creditor, which is composed of the outstanding principal amount including any accrued interest. So, the nominal value reflects the sum of funds originally advanced, plus any subsequent advances, plus any interest that has accrued, less any repayments (which includes any payments covering interest accrual). Nominal value in domestic currency of a debt instrument denominated in foreign currency also includes holding gains or losses arising from exchange rate changes.

Paragraph 7.42 Nominal values are not adjusted for expected losses or for changes in interest rates. The market value may differ from the nominal value primarily due to changes in market interest rates and the possibility that some liabilities may not be repaid. The possible divergence between nominal and market values arises for loans, but it can also arise for deposits and other accounts receivable/payable.

Paragraph 7.43 The use of nominal values for some nonnegotiable instruments, instead of market-equivalent values, in the IIP is partly influenced by pragmatic concerns about data availability and also by consistency in reporting by debtors and creditors. Nominal valuation is also useful in its own right, however, because it shows actual legal liability and the starting point of creditor recovery behavior.

Paragraph 7.44 The nominal value can be reduced by a write-off, restructuring, or debt forgiveness:

- Liabilities are canceled or written off, in part or in full, by the creditor as uncollectible, usually because of the bankruptcy or liquidation of the debtor, as discussed in paragraphs 9.8–9.11.
- In a formal debt reorganization, the old liability is regarded as being extinguished and a new liability created. (See Appendix 2, Debt Reorganization and Related Transactions.)

Paragraph 7.46 The fair value of loans is shown as a memorandum item for creditors. If fair value data for loans are not available, the nominal value of nonperforming loans should be provided as a memorandum item. These memorandum items are included for assets but not liabilities. If fair value data are available, nonperforming loans is a supplementary item. Data on loan loss (or bad debt) provisions and arrears also may be provided on a supplementary basis.

Paragraph 7.48 Fair value is defined as the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. That is, fair value represents a market-equivalent value, namely, an estimate of what could have been realized if the creditor had sold the loan. It is the preferred indicator of the effect of loan impairment as it represents an attempt to measure the realizable value. The fair value of loan assets is shown as a memorandum item for assets, where available.

Paragraph 7.49 The calculation of fair value takes into account expected loan losses. In addition, in the case of fixed-rate loans, it takes into account changes in market interest rates. In practice, the availability of fair value estimates of loans is limited by business accounting practice. A recent transaction in the loan or one of similar term, credit risk, and so on provides a good guide to the fair value. As the time since the transaction becomes longer and conditions change, such transactions values become historic prices and not market-equivalent values.

Paragraph 7.51 Nonperforming loans are recorded at nominal value, which allows them to be compared with the total value of loans at nominal value. The value should include accrued interest not yet paid. Loans continue to be included in nonperforming loans until written off (see paragraphs 9.8–9.11), forgiven (see paragraphs 13.22–13.23), reorganized (see paragraph 9.29 and Appendix 2), or they become performing loans.

Paragraph 7.56 In view of the range of options concerning measures of impairment of loans and other nonnegotiable instruments, it is particularly important that metadata provide information on the definitions and sources used. As accounting procedures become more widely standardized, more prescriptive guidance may be given in statistical manuals for the adoption of particular indicators of impairment of loans.

Paragraph 9.33 Nominal valuation is used for positions in nonnegotiable instruments, namely loans, deposits, and other accounts receivable/payable (see paragraphs 7.40–7.44). However, when transactions in these instruments do occur, they are valued at market prices (see paragraph 8.12), with transaction prices often being less than the nominal values, because the market price takes account of the possibility of default. To account for the inconsistency between the market valuation of transactions and nominal valuation of positions, the seller records other price changes during the period in which the sale occurs, equal to the difference between the nominal and the transaction value and the buyer records an opposite amount as other price changes.

BPM6 COMPILATION GUIDE

Paragraph 9.33 Nominal valuation is used for positions in nonnegotiable instruments—namely, loans, deposits, and other accounts receivable/payable. However, when transactions in these instruments do occur, they are valued at market prices, with transaction prices often being less than the nominal values, because the market price takes account of the possibility of default. To account for the inconsistency between the market valuation of transactions and nominal valuation of positions, the seller records other price changes during the period in which the sale occurs, equal to the difference between the nominal and the transaction value. The buyer records an opposite amount as other price changes. Information on such transactions may be available from a debt database or register maintained by authorities or from the books of the creditor/debtor.

Paragraph 10.84 Loan positions are recorded at nominal value; deriving transactions from positions data is The Financial Account 167 therefore relatively straightforward for loans denominated in domestic currency, with the issue of addressing price changes not applicable. However, for loans (as well as for deposits and other accounts receivable/ payable) sold at discount, the transaction values recorded in the financial account may differ from the nominal value recorded in the IIP. Such differences are recorded as valuation changes in the other changes in financial assets and liabilities account.

Paragraph 2.33 The *[EDS] Guide* recommends that debt instruments are valued at the reference date at nominal value, and, for debt securities, at market value as well. The nominal value of a debt instrument is a measure of value from the viewpoint of the debtor because at any moment in time it is the amount that the debtor owes to the creditor. This value is typically established by reference to the terms of a contract between the debtor and creditor, and it is frequently used to construct debt ratios, such as those described in Chapter 14. The market value of a debt security is determined by its prevailing market price, which, as the best indication of the value that economic agents currently attribute to specific financial claims, provides a measure of the opportunity cost to both the debtor and the creditor. It is the valuation principle adopted in the *BPM6* and *2008 SNA*. Box 2.2 presents a comparison matrix of the valuation methods.

Paragraph 2.34 Nominal value is the amount the debtor owes to the creditor, which comprises the outstanding principal amount, including any accrued interest. So the nominal value of a debt instrument reflects the value of the debt at creation plus any subsequent economic flows, such as transactions (e.g., repayment of principal), valuation changes (including exchange rate and other valuation changes other than market price changes), and any other changes. Conceptually, the nominal value of a debt instrument can also be calculated by discounting future interest and principal payments at the existing contractual interest rate(s) on the instrument; these interest rates may be fixed rate or variable rate. For fixed-interest rate debt instruments and debt instruments with contractually predetermined interest rates, this principle is straightforward to apply because the future payment schedule and the rate(s) to apply are known, but it is less straightforward to apply to debt instruments with variable interest rates that change with market conditions. The appendix at the end of this chapter provides examples of calculating the nominal value of a debt instrument by discounting future payments of interest and principal.

Box 2.2 Valuation: Comparison Matrix

Valuation	Definition	Comments
Nominal value	Outstanding principal amount, including interest accrued	Contractual interest rate. For deep-discount bonds and zero-coupon bonds, the outstanding principal amount increases in value over time by the implicit yield (interest rate) on the debt instrument at issuance, derived from the difference between the issue price and the redemption price.
Face value	Undiscounted amount of principal to be repaid	The face value may include interest costs that have not yet accrued, which is counter to the accrual principle.
Market value	Amount that willing buyers pay to acquire something from willing sellers	Before maturity, the market value of a debt instrument may be greater or less than the face value. As debt instruments approach maturity, market approaches face value.
Fair value	Amounts for which a financial asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction.	Approximate to market value. Valuation according to the market-value equivalent is needed for valuing financial assets and liabilities that are not traded in financial markets or that are traded only infrequently.

Paragraph 2.37 The fair value of a debt instrument is its "market-equivalent" value and is defined as the amount for which a financial asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction. It thus represents an estimate of what could be obtained if the creditor were to sell the financial claim.

Paragraph 2.38 The *[EDS] Guide* recommends that debt instruments other than debt securities—such as loans, currency and deposits, and trade credit and advances—be valued at nominal value only. The nominal value of a debt instrument could be less than originally advanced if there have been repayments of principal, debt forgiveness, or other economic flows, such as those arising from indexation, that affect the value of the amount outstanding. The nominal value of a debt instrument could be more than originally advanced because of (e.g.) the accrual of interest costs or other economic flows.

Paragraph 2.40 For some debt instruments, such as loans, the use of nominal values is partially influenced by pragmatic concerns about data availability and the need to maintain symmetry between debtors and creditors. In addition, because loans are not intended for negotiability, without an active market, estimating a market price can be somewhat subjective. Nominal value is also analytically useful because it shows actual legal liability and the starting point of creditor recovery behavior. In some instances, loans may be traded, often at discount, or a fair value may exist or would be possible to estimate. Loans that have become negotiable de facto should be reclassified under debt securities.

Paragraph 2.41 Nonperforming loans are recorded at nominal value, which allows them to be compared with the total value of loans at nominal value (see Appendix 3, the "Nonperforming Loans" section). The value should include accrued interest not yet paid. Loans continue to be included in external debt until written off, forgiven, or reorganized. It is recognized that nominal value provides an incomplete view of the financial position, when the loans are nonperforming. Therefore, if significant, compilers may find it useful to separately identify the nominal value of nonperforming loans included in external debt.

Paragraph 2.48 The *[EDS] Guide* recommends that debt securities be valued at both nominal and market value.[25] For a debt security, both nominal and market value can be determined from the value at creation and subsequent economic flows, except that market valuation takes account of any changes in the market price of the instrument, whereas nominal value does not.

Paragraph 15.18 The method of valuing financial assets and liabilities might depend on the focus of the analysis. The *[EDS] Guide* recommends that debt instruments are valued at the reference date at nominal value, and for debt securities, at market value as well. The debtor will be interested in the nominal value of its debt because at any moment in time it is the amount that the debtor owes to the creditor at that moment, for example, applying nominal values might help identify maximum exposure which can be used to assess liquidity risk. Also, the debtor is well advised to monitor the market value of its debt. The market value and the spreads over interest rates on "risk-free" instruments provide an indication to the borrower of the market view on its ability to meet debt obligations as well as current market sentiment toward it.[11] This is important information because it might influence future borrowing plans: whether it is advantageous to borrow again while terms seem good, or whether there are early warning signs of

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[25] This includes debt securities acquired under reverse transactions (see Table 4.6).

[11] Increasingly, information from credit derivatives, such as default swaps and spread options, also provides market information on an entity's credit standing.

possible increased costs of borrowing, or even refinancing difficulties. However, for those countries with debt that has a very low valuation or is traded in markets with low liquidity (or both), a sudden swing in sentiment might cause a very sharp change in the market value of external debt, which might also be reversed suddenly. Because it would be unaffected by such swings, information on the nominal value of external debt would be of particular analytical value in such circumstances.

MONETARY AND FINANCIAL STATISTICS MANUAL AND COMPILATION GUIDE (MFSMCG)

Paragraph 2.34 Deposits and loans in this Manual, as well as in the *2008 SNA*, are valued at nominal value—that is, the outstanding amount the debtor owes to the creditor, which comprises the outstanding amount including accrued but not yet paid interest. The same valuation principle applies to trade credit and advances.

Paragraph 4.101 Impaired loan trading. Loans sold in secondary markets range from high-quality loans (those with little credit risk) to nonperforming or otherwise impaired loans for which repayment is highly uncertain, or even unlikely. Transactions in nonperforming or otherwise impaired loans often involve purchases at deep-discounted prices (i.e., at well below the nominal value, or carrying amount, of the loans), reflecting the potential default on interest and principal payments for significant proportions of the loan portfolios purchased. These instruments should be classified as loans even if sold at a fraction of nominal value unless there is evidence of secondary-market trading, including the existence of market makers, and frequent quotations of the instruments, such as provided by bid-offer spreads. In the latter case, they are classified as debt securities and recorded at market value.

FAIR VALUE

Paragraph 5.44 The fair value of a financial asset or liability is a market-equivalent value defined as the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. It thus represents an estimate of what could be obtained if the creditor had sold the financial claim.

Paragraph 5.45 Two general methods for establishing fair values involve use of either:

a. Relative valuation: Market prices of financial assets and liabilities that are market-traded, but otherwise similar to the nontraded or infrequently traded financial assets and liabilities that are being valued; or

b. Absolute valuation: Discounted present values of future cash flows.

Paragraph 5.46 Relative valuation involves estimating the fair value of nontraded or infrequently traded financial assets and liabilities using the market price of a similar but market-traded financial instrument. For example, the fair-value price of an infrequently traded bond with five-year remaining maturity might be given by the market price of a publicly traded five-year bond having a comparable risk. In other cases, it may be appropriate to use the market price of a similar financial instrument, but with some adjustment in the fair value to account for differences in liquidity and/or risk level between the traded and nontraded instruments. For example, the fair value of unlisted equity shares held by an FC may be based on the market price of equity shares of another similar corporation that has traded shares. Furthermore, the fair

value may need to be adjusted for differences in the scale of operations, number of outstanding shares, and other factors that are perceived as differentiating the values of the nontraded and traded shares.

Paragraph 5.47 In some cases, the financial asset or liability may possess some characteristics of each of several other financial instruments, even though its characteristics are not generally similar to any one of these instruments. In such cases, information on the market prices and other characteristics (e.g., type of instrument, issuing sector, maturity, credit rating) of the traded instruments should be considered in estimating the fair value of the nontraded instrument.

Paragraph 5.48 Absolute valuation involves valuing financial assets and liabilities based on the present or time-discounted value of future cash flows. This is a well-established approach to valuation, in both theory and practice (see Box 5.1).

Box 5.1 Fair Valuation Using the Present Value of Future Cash Flows

The fair value of a financial asset or liability is calculated as the sum of the present value of all future cash flows, as shown in the following equation:

$$\text{Fair value} = \sum_{t=1}^{n} \frac{(\text{cash flow})_t}{(1+i)^t}$$

where $(\text{cash flow})_t$ denotes the cash flow in a future period (t), n denotes the number of future periods for which cash flows are expected, and i denotes the discount rate that is applied to discount the future cash flow in period t. A single discount rate, i, is used in this approach to discount the cash flow in all future periods.

The method is relatively easy to apply in valuing any financial asset or liability if (1) the future cash flows are known with certainty or can be estimated and (2) a discount rate can be estimated for the life of the financial asset. Market interest rates, current or expected, are often used as the discount rates, based on the assumption that these market interest rates are most representative of the cost of acquiring funds in the financial markets.

The recommended discount rate is the pre-tax effective yield (i.e., yield to maturity) on actively traded securities for which the risk is approximately the same as those of the securities for which the future cash flows will be discounted. The range of securities issued in some countries may be so narrow that the discount rate may need to be represented by the yield on government securities or other actively traded securities that have similar duration,[1] but lower risk (such as credit, liquidity, or other risks) than the securities to be valued. The yield (relevant market interest rates) on the actively traded securities should be used as the discount rate, without adding a risk premium, unless evidence is available to substantiate the estimate of a risk premium.

A more complex approach to estimate the present value (that is, fair value) of a financial instrument (a bond) is, instead of applying a single discount rate, to apply time-variant discount rates to the future cash flows—that is, by using:

$$\text{Fair value} = \sum_{t=1}^{n} \frac{(\text{cash flow})_t}{(1+i_t)^t}$$

where i_t denotes the discount rate in period t, which in general may differ from the discount rate in other time periods. Forward rates could be used as the discount rates, i_t ($t = 1, 2, \ldots, n$), which are the rates at various maturities along a *zero-coupon yield curve* (or simply *zero curve*) for which bond yields on a zero-coupon basis have been estimated from the yields of bonds with coupons.

This approach is more difficult to implement than the single discount-rate approach described herein because of the data requirements—that is, yields on short-, medium-, and long-term securities in the same risk class as the securities that are to be fair valued—are required.

[1] Duration is the weighted average term to maturity of a debt security. It can be used to measure the impact on the value of a debt security that will result from a one percentage point change in interest rates. Duration takes into account the schedule of interest and principal payments that occur throughout the life of the debt security.

Paragraph 5.49 It is important to clearly distinguish between various valuation terms. Market values, fair values (explained previously), nominal values, and book values should be distinguished from such notions as amortized values, face values, and historic cost, explained as follows.

a. Nominal value refers to the outstanding amount at any moment in time the debtor owes to the creditor. It reflects the sum of funds originally advanced, plus any subsequent advances, plus any interest that has accrued, less any repayments (which includes any payments covering accrued interest). For debt instruments indexed to a "narrow" index (such as a commodity price, stock price, or gold price), the nominal value can also include holding gains and losses arising from movements in the index (see also paragraph 5.58). Nominal value of a financial asset or liability denominated in foreign currency also includes holding gains or losses arising from exchange rate changes. At any specific point in time, the nominal value of traded financial assets may deviate from their market values due to revaluations arising from market price changes. For financial instruments such as deposits, loans, and other accounts receivable/payable, the lack of generally available market values means that these instruments are recorded using their nominal value.

b. Amortized value reflects the amount at which the financial asset or liability was measured at initial recognition minus the principal repayments and excluding accrued interest. On the date of each scheduled payment (after the scheduled payment is made), amortized value is the same as nominal value, but it may differ from the nominal value on other dates because nominal value includes interest that has accrued and not been paid.

c. Face value is the undiscounted amount to be paid to the holder of a debt security at or before maturity. It is also known as "par value" or simply "par." Before maturity, the market value of a debt security may be greater or lower than face value, depending on the interest rate pay- able and the perceived risk of default. As debt securities approach maturity, market value approaches face value. At maturity, the market value is equal to the face value.

d. Book value generally refers to the value recorded in the entity's records. Book values may have different meanings because their values are influenced by the timing of acquisition, company takeovers, frequency of revaluations, and tax and other regulations. Book value is used in this Manual to value Equity liability [MS].

e. Historic cost reflects the cost at the time of acquisition and sometimes it also may reflect occasional revaluations.

OTHER CHANGES IN THE VOLUME OF ASSETS

Paragraph 5.80 Data for some OCVA entries should be available from an FC's accounting records. The OCVA entries for an individual FC can be separated into those arising from extraordinary or infrequent events and those that are usually recorded on a regularly recurring basis. Many FCs are likely to experience few, if any, extraordinary events that give rise to asset losses that are to be posted to OCVA. In addition, an FC would be expected to have relatively infrequent OCVA entries that result from financial assets or liabilities being reclassified across financial instrument categories.

LOANS

Paragraph 5.122 Loans are outstanding from the time when funds are disbursed from the creditor to the debtor until the time when they mature or are liquidated prior to maturity—for example, because of early repayment or default by the debtor. Stock data for domestic currency-denominated loans (assets or liabilities) are recorded at nominal value—that is, the creditor's outstanding claim (equal to the debtor's

obligation), which comprises the outstanding principal amount including any accrued but not yet paid interest.

Paragraph 5.123 Like deposits, the use of nominal values is influenced by pragmatic concerns about the need to maintain symmetry between debtors and creditors. Loans also are by definition not traded and therefore estimating a market price can be subjective. Further, the nominal value of the loan is analytically useful because it represents the legal liability of the debtor. However, it is recognized that nominal value provides an incomplete view of the financial position, particularly when some loans are nonperforming. It is recommended that data on expected loan losses (disaggregated by debtor sector) be included as memorandum items accompanying the sectoral balance sheets described in Chapter 7. The expected realizable value of loans may be calculated based on the reported gross amounts of loans and expected loan losses (see also paragraph 5.142).

Paragraph 5.126 The entire loan portfolio is to be valued at nominal value when presenting the loan data in the sectoral balance sheets described in Chapter 7. In particular, outstanding loans should not be adjusted for provisions for loan losses. A loan portfolio is adjusted downward only when: (1) loans are written off as uncollectible (OCVA), or (2) when the outstanding amount of a loan has been reduced through formal debt reorganization (revaluation or a transaction if it is debt forgiveness, as explained in the next paragraph).

Paragraph 5.128 When a loan is sold at below (above) nominal value, the transaction is recorded at the transaction value and the position is recorded at nominal value. To account for the inconsistency between the market valuation of transactions and nominal valuation of positions, the seller records a revaluation during the period in which the sale occurs, equal to the difference between the nominal and the transaction value, while the buyer records an opposite amount as a revaluation.[32] Such revaluations directly impact Equity liability [MS] through valuation adjustment.

NONPERFORMING LOANS AN INTEREST ARREARS

Paragraph 5.137 Nonperforming loans (NPLs; defined in paragraph 4.100) indicate potential losses and may result in actual losses for the FC. The recommendation is that NPLs should continue to be recorded at nominal value and entries in the amount of the provisions for loan losses be included in Other accounts payable—other [MS] (see paragraph 5.231).

Paragraph 5.138 Interest should be shown accruing until a nonperforming loan is repaid or the principal is written off, even if interest arrears are being accumulated. An interest arrear—that is, interest overdue for payment—is included in the value of the outstanding asset/liability. The same approach is taken for principal arrears. Interest and principal arrears data should be reported in the memorandum items that accompany the sectoral balance sheets. If there is recognition that the interest and/or principal may not be received in the future, an additional provision for expected loss should be made by the creditor as an OCVA flow (provision for expected loss) and reported in Other accounts payable-other [MS], with a contra-entry in Equity liability [MS] through Current year result.

IMPAIRED LOAN TRADING

Paragraph 5.141 This Manual recommends that a nonperforming or otherwise impaired loan that has been purchased at a fraction of its nominal value should continue to be recorded as a loan if the purchase

[32] The same principles apply for deposits and other accounts receivable that are sold at below (above) nominal value.

is a one-off transaction (see also paragraph 5.126). Additionally, it is advantageous to retain the loan classification for these assets to facilitate the future posting of provisions for loan losses, when necessary (see paragraph 4.101).

MEMORANDUM ITEMS FOR LOANS

Paragraph 5.142 This Manual recommends including the following loan-related data in memorandum items in sectoral balance sheets to allow calculating the aggregate amount of loans based on different valuations: (1) total accrued interest on loans for both assets and liabilities; (2) total amount of interest and principal arrears on loan assets and liabilities; and (3) expected loan losses disaggregated by economic sector of debtor. Furthermore, this Manual recommends including the following loan-related data in memorandum items:

(1) loans with maturity of one year or less by currency and by counterpart sector for both assets and liabilities; and

(2) loans extended to nonresident FCs and loans received from them.

Paragraph 5.143 Data on interest and principal arrears should include all overdue payments that are past due. For some FCs, interest and principal arrears are likely to arise mainly from their loans to nonfinancial corporations (NFCs) and/or to households. It is recommended that FCs report interest and principal arrears on loan assets disaggregated by borrowing sector.

Paragraph 5.144 Expected loan losses should be disaggregated by economic sector of debtor. The accounting data on provisions for loan losses can be directly used in estimating the expected loan losses, if these data reflect, to a reasonable degree, the total expected losses on nonperforming loans. Specific provisions are provisions against expected and identifiable losses on loans. General provisions are provisions against the possibility of unidentifiable losses that may arise within a portfolio of loans, even though the individual loans that may become uncollectible cannot be identified. To be directly useful in estimating expected loan losses, the data for general, as well as for specific, provisions for loan losses must be disaggregated by economic sector of the debtor.

Paragraph 5.145 In cases where source data on provisions do not reasonably reflect the total expected losses on NPLs, compilers of monetary statistics might attempt to report in memorandum items a more accurate measure of expected losses, as discussed below.

Paragraph 5.146 Expected loan losses include three categories that are based on the secured or unsecured nature of the loan and the prospects for full or only partial loss of the nominal value of the loan:

a. Full loss on unsecured (that is, uncollateralized) loans. The expected loss on an unsecured loan is the entire nominal value of the loan, if the creditor expects no future cash flows from the loan.

b. Partial loss on unsecured loans. The expected loss on an unsecured loan is less than the nominal value of the loan, because the lending institution expects some future cash flow through recourse to its creditor claim on the assets of an enterprise that will be liquidated.

c. Partial loss on secured (that is, collateralized) loans. The expected loss on a secured loan is the nominal value of the loan less any recovery that results from possession and subsequent sale of the assets that were collateral for the loan.

Paragraph 5.147 The expected loan loss is the difference between the nominal amount and the recoverable amount— that is, the present value of the expected cash flows to be obtained from the borrower or through liquidation of collateral. The principles for the measurement of the recoverable amount for impaired assets are consistent with IAS 39.63–65:

a. The discount rate to be used in calculating the present value of expected cash flow is the original yield to maturity on the loan.[37]

b. If the loan has a variable interest rate, the discount rate for measuring the recoverable amount should be the current yield to maturity.[38]

c. The estimated cash flows from secured loans should be based on the expected net proceeds from the sale of the assets used as collateral;[39] costs incurred in acquiring, storing, or maintaining the collateral should be netted from the proceeds of the asset liquidation, or should be treated as negative cash flows, in calculating the present value of the expected cash flows.

Paragraph 5.148 The data for both outstanding loans and expected loan losses are disaggregated by economic sector so that the realizable value of loans to each sector can be derived by deducting expected loans losses from the nominal value of loans.

PROVISIONS FOR LOSSES ON ASSETS AND WRITE-OFFS

Paragraph 5.231 The *2008 SNA* framework does not contain accounts for provisions for losses on loans and other financial assets because changes in the value of a financial asset that are imposed solely to meet regulatory, supervisory, or accounting requirements are not recorded in the SNA. Provisions for losses on assets are treated as bookkeeping entries that are internal to the corporation and do not appear in the *2008 SNA*, except in the case of expected losses on NPLs that appear as memorandum items in the balance sheets. In the monetary statistics, on the other hand, such a provision is classified under Other accounts payable [MS]—other and is treated as the precursor of a loan (or other asset) write-off and, like loan write-offs, is treated as an OCVA flow. OCVA entries and contra-entries for these categories are:

a. Provisions for losses on financial assets. An OCVA entry in the amount of the provision created during the reference period is posted to Provisions for loan losses (a subcategory of Other accounts payable [MS]—other). The OCVA contra-entry is a reduction in Equity liability [MS] (Current year result).[69]

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[37] The original yield to maturity is original effective interest rate in IAS terminology.

[38] The current yield to maturity is current effective interest rate in IAS terminology—the discount rate that equates the current nominal value of the loan to the present value of the future principal and interest payments that would be received if the loan were not impaired.

[39] See IAS 39, AG84 for more information on estimating cash flows for collateralized loans.

[69] The positive entry in Provisions for loan losses and negative entry in Equity liability [MS] preserve the adding-up requirement for the OCVA column (see the stock and flow illustration in Table 5.2).

b. Financial asset (loan) write-offs. An asset (loan) write-off is shown as an OCVA reduction in the outstanding amount of the financial asset (loan). The OCVA contra-entry is a reduction in Provisions for loan losses within Other accounts payable [MS]—other. If the full amount of the financial asset (loan) write-off has been provisioned, the negative OCVA entry for the reduction in the amount of the financial asset (loan) is matched with the OCVA entry for a reduction in Provisions for loan losses (a liability account), and the adding-up condition is maintained for the OCVA column shown in Table 5.2. No provision for loss may have been made for the financial asset (loan), or the provision for loss may have been insufficient to cover the entire amount of the financial asset (loan) loss that is written off. In such instances, all or part of the OCVA contra-entry is posted as a reduction in Equity liability [MS] (Current year result or General and special reserves).[70]

c. Reversal of provisions for financial asset (loan) losses. Financial asset (loan) recoveries—that is, unexpected repayment of impaired financial assets (loans)—sometimes occur prior to write-off. Whereas the repayment is recorded as a transaction (an increase in currency or other financial asset and a reduction in financial assets), an OCVA entry in the amount of the financial asset (loan) recovery is also made to reverse the earlier provisioning for financial asset (loan) loss, and an OCVA contra-entry is posted as an increase in Equity liability [MS] (Current year result) to reverse the previous entry that was posted when the provision for loss was made. The recovery may be the full amount or only part of the principal and interest of the financial asset (loan). In exceptional cases, financial asset (loan) repayment may occur after the write-off. If this is the case, an OCVA increase in the respective financial asset (loan) is first recorded with a contra-entry increase in Equity liability [MS] (Current year result), thereby reversing the earlier entries in the amount of the loan write-off. The repayment is then recorded as a transaction reducing the financial asset (loan), and a contra-entry is made for the cash or other form of payment from the defaulted borrower.

MANUAL ON NATIONAL ACCOUNTS—FINANCIAL PRODUCTION, FLOWS AND STOCKS IN THE SYSTEM OF NATIONAL ACCOUNTS (MNAFP)

Includes worked examples based on SNA recording and reference on hierarchy of sources for nonfinancial corporations.

Paragraph 4.154. Two memorandum items are recommended relating to nonperforming loans. The first is the nominal value of the loans so designated, including any accrued interest and service charge. The second is the market equivalent value of these loans. The closest approximation to market equivalent value is fair value, which is “the value that approximates to the value that would arise from a market transaction between two parties”. Fair value can be established using transactions in comparable instruments, or using the discounted present value of cash flows, or may sometimes be available from the

[70] The permissibility of using special and general reserves to absorb all or part of the loan write-off would depend on the national accounting standards, the supervisory regulations for the maintenance and use of special and general

reserves, and the financial circumstances of the FC. As part of a major clean-up of its loan portfolio, an FC may have loan write-offs that exceed its retained earnings. The corporation may be permitted to charge part of the loan write-offs against special and general reserves, in conjunction with a workout plan for rebuilding such reserves in the future.

balance sheets of the creditor. In the absence of fair value data, the second-best approach is for the memorandum item to show nominal value less expected loan losses.

Table 4.10
Recording of non-performing loans

Positions	Stock	Transaction	Reclassification	Write-off	Stock
	t–1	period *t*–1 to *t*			*t*
Nominal value					
Loans	1000	200	0	-90	1110
Performing loans	500	200	-50		650
Non-performing loans	500		50	-90	460
Covered by loan lossprovisions	400		70	-90	380
Not yet covered by loan lossprovisions	100		-20		80
Market equivalent value					
Non-performing loans	375		24	-51	348
= Nominal value	500		50	-90	460
– Loan lossprovisions	125		26	-39	112
of which not yet covered	100		-20		80

Paragraph 4.125. The distinction between loans (AF4) and debt securities (AF3) is that loans are nonnegotiable financial instruments while debt securities are negotiable financial instruments. Negotiable financial instruments are those instruments whose legal ownership is readily transferred from one unit to another by delivery or endorsement. Negotiable instruments are designed to be traded on organized or other markets.

Paragraph 4.126. Loans are evidenced by a single document and transactions in loans are carried out between one creditor and one debtor. (Several creditors, however, grant syndicated loans.) By contrast, debt securities issues consist of a large number of identical documents, which together form the total amount borrowed.

Paragraph 4.127. A secondary market in loans exists and two situations can arise:

(a) If there are frequent market quotations available, a loan is reclassified as a debt security;[113]

(b) If a loan is traded only once and if there is no evidence of a continuing market, it is not reclassified and continues to be treated as a loan.

Paragraph 4.128. In many cases financial corporations offer standardized loans. These are characterized by the fact that the financial corporation determines the conditions of the contract; the borrower can only accept or refuse. This is typical for household loans. The conditions applying to not standardized loans, on the other hand, are usually the result of negotiations between the creditor and the debtor. This is an important criterion, which facilitates a distinction between not standardized loans and debt securities. In the case of public security issues, the borrower determines the issue conditions, possibly after

[113] If a loan is sold several times it should be reclassified as a debt security and the valuation should change from nominal value to market value. This would create another change in the volume of assets at the time of conversion in loans and debt securities and then a subsequent revaluation as a debt security.

consulting the bank/lead manager. In the case of private security issues, however, the creditor and the debtor negotiate the issue conditions.

Worked example 4.1. Recording of the sale of loans (provided by the Banco de Portugal and the European Central Bank)

Paragraph 4.129. This worked example refers to the sale of loans as part of a "bailout" process. The main objective of the sale of loans is to "clean" the balance sheet of a deposit-taking corporation except the central bank. One of two options may occur with reference to the sale price of the loans:

(a) Loans are sold at "market price" (fair value);

(b) Loans are sold at a price different from the "market price" (fair value); this has an impact on net lending (+)/net borrowing (-) of both the buying institutional unit and the selling institutional unit, with opposite signs. It means that the selling institutional unit benefits from the sale in case the sale price is assumed to be above the market price.

Paragraph 4.130. The opening balance sheets of the selling institutional unit (a deposit-taking corporation except the central bank) and of the buying institutional unit, general government through a financial defeasance structure, show the assets and liabilities involved in the envisaged operations before the sale of loans at the beginning of the period t (0) to t (1) figures. It is assumed that the nominal value of the loans is currency unit (CU) 1,300.0 and the market value (fair value) of the loans is CU 800.0.

Paragraph 4.131. Following the *2008 SNA,* the loans are recorded at nominal value in the balance sheet of the deposit-taking corporation except the central bank as the selling institutional unit. Information on the market value (fair value) of the loans is made available from the financial accounting statements (business accounts) of the deposit-taking corporation except the central bank as the selling institutional unit.

Opening balance sheets at the beginning of period* t *(0) to* t *(1)

Deposit-taking corporation except the central bank (seller)				General government (buyer)			
Financial assets		*Liabilities and net worth*		*Financial assets*		*Liabilities and net worth*	
Currency and deposits (AF2)	X			Currency and deposits (AF2)	Y		
Loans (AF4)	1,300.0						
		600.0	Equity (AF51)			0	Equity (AF51)
		X+700.0	Net worth (B90)			Y	Net worth (B90)

Option 1: Loans are sold at "market price" (fair value)

Paragraph 4.132. It is assumed that the deposit-taking corporation except the central bank sells the loans to general government at "market price" (fair value), which is CU 800.0. The following table shows the transactions as accounting entries in the financial account of both institutional units.

The loans are recorded at nominal value in the balance sheet of the deposit-taking corporation except the central bank as the selling institutional unit. Information on the market value (fair value) of the loans is made available from the financial accounting statements (business accounts) of the deposit-taking corporation except the central bank as the selling institutional unit.

Transactions

Deposit-taking corporation except the central bank (seller)				General government (buyer)			
Changes in financial assets		*Changes in liabilities and net worth*		*Changes in financial assets*		*Changes in liabilities and net worth*	
Currency and deposits (F2)	800.0			Currency and deposits (F2)	-800.0		
Loans (F4)	-800.0			Loans (F4)	800.0		
		0	Net lending (+) / net borrowing (-) (B9)			0	Net lending (+) / net borrowing (-) (B9)

REVALUATIONS

Paragraph 4.133. The following table shows the realized holding losses of the deposit-taking corporation except the central bank as the seller of the loans (CU 500.0) and the realized holding gains of general government as the buyer of the loans (CU 500.0) as accounting entries in the revaluation account of both institutional units.

Deposit-taking corporation except the central bank (seller)				General government (buyer)			
Changes in financial assets		*Changes in liabilities and net worth*		*Changes in financial assets*		*Changes in liabilities and net worth*	
Loans (AF4)	-500.0			Loans (AF4)	+500.0		
		-500	Equity (AF51)			500.0	Equity (AF51)
		0	Changes in net worth (B90)			0	Changes in net worth (B90)

Closing balance sheets at the end of period t *(0) to* t *(1)*

Deposit-taking corporation except the central bank (seller)				General government (buyer)			
Financial assets		*Liabilities and net worth*		*Financial assets*		*Liabilities and net worth*	
Currency and deposits (AF2)	X+800.0			Currency and deposits (AF2)	Y – 800.0		
				Loans (AF4)	1,300.0		
		100.0	Equity (AF51)			500.0	Equity (AF51)
		X+700.0	Net worth plus equity			Y	Net worth (B90)

In this case there is no impact on the net worth of both institutional units. The sale of loans leads to a relocation of assets and liabilities between the transacting institutional units.

Option 2: Loans are sold above the "market price" (fair value)

Paragraph 4.134. It is assumed that the deposit-taking corporation except the central bank sells the loans to general government at CU 1,000.0. This price is above the "market price" (fair value), which is CU 800. General government provides a capital transfer to the deposit-taking corporation except the central bank of CU 200.0, which is the difference between CU 1,000.0 and CU 800.0, the "market price" (fair value). The following table shows the transactions as accounting entries in the capital account and in the financial account of both institutional units.

Transactions

Deposit-taking corporation except the central bank (seller)				General government (buyer)			
Changes in assets		*Changes in liabilities and net worth*		*Changes in assets*		*Changes in liabilities and net worth*	
Capital account							
		200.0	Capital transfer receivable (D9r)			-200.0	Capital transfer payable (D9p)
	200.0		Net lending (+) / net borrowing (-) (B9)		-200.0		Net lending (+) / net borrowing (-) (B9)
Financial account							
Currency and deposits (F2)	1,000.0			Currency and deposits (F2)	-1,000.0		
Loans (F4)	-800.0			Loans (F4)	800.0		
		200.0	Net lending (+) / net borrowing (-) (B9)			-200.0	Net lending (+) / net borrowing (-) (B9)

REVALUATIONS

Paragraph 4.135. The following table shows the realized holding gains and losses as accounting entries in the revaluation account of both institutional units. It is assumed that the realized holding losses and gains are reflected directly in the equity of both institutional units.

Deposit-taking corporation except the central bank (seller)				General government (buyer)			
Changes in financial assets		*Changes in liabilities and net worth*		*Changes in financial assets*		*Changes in liabilities and net worth*	
Loans (AF4)	-500.0			Loans	+500.0	+500.0	Changes in net worth plus equity
		-500.0	Equity (AF5)			+500.0	Equity (AF5)
		0	Changes in net worth			0	Changes in net worth

Closing balance sheets at the end of period t *(0) to* t *(1)*

Deposit-taking corporation except the central bank (seller)				General government (buyer)			
Financial assets		*Liabilities and net worth*		*Financial assets*		*Liabilities and net worth*	
Currency and deposits (AF2)	X+1,000.0			Currency and deposits (AF2)	Y–1,000.0		
				Loans (AF4)	1,300.0		
		100.0	Equity (AF51)			500.0	Equity (AF51)
		X+900.0	Net worth (B90)			Y+200.0	Net worth (B90)

In this case there is an impact on the net worth of both institutional units, amounting to the capital transfer from the general government to the deposit-taking corporation except the central bank. As in the previous case, the sale of loans also leads to a relocation of assets and liabilities between the transacting institutional units.