Appendix I. Monetary and Financial Statistics and Other Macroeconomic Statistics

I. Introduction

A1.1. This Appendix describes the relationship between monetary and financial statistics (MFS) on one side, and government finance (GFS) and external sector statistics on the other. (See also Appendix 7 of the *Government Finance Statistics Manual (GFSM2013)* and Appendix 6 of the *Balance of Payments and International Investment Position Compilation Guide (2013)*). The relationships between MFS and national accounts are covered in chapters 2 and 8 of this *Manual*.

A1.2. It is important for compilers and users of MFS to understand how MFS relate to the other macroeconomic datasets. More specifically, an understanding of the linkages fosters consistency in methodology between the respective datasets. This *Manual* is part of the family of statistical guidelines and can, therefore, be seen to be extending and elaborating on the *2008 SNA*. The conceptual framework of this *Manual* is consistent, in principle, with the *2008 SNA* with respect to principles and concepts, such as sectoring of institutional units, classification of financial assets and liabilities, and accounting rules. Thus, the main principles and concepts of this *Manual* also accord with those in *BPM6* and the *GFSM 2014.*

A1.3. The institutional arrangements for compiling and producing macroeconomic statistics differ from country to country. In almost all countries, the central bank (CB) is primarily involved in compiling monetary and financial data to allow for monitoring financial conditions and the implementation of monetary policy. CBs in many economies are also responsible for compiling external sector statistics. As regards compilation of GFS, the ministry of finance (MOF) is usually the lead agency, but other government agencies as well as the national statistics office (NSO) and the CB may be involved. Compilation of all macroeconomic datasets should be based on consistent methodological guidance and, where different agencies are involved, it is essential that these national agencies coordinate efforts to ensure consistency in data outputs.[1]

A1.4. A clear understanding of the linkages between datasets will assist countries in producing comparable and consistent statistics needed for economic analysis and policy decisions. Because of their relatively high level of reliability and comprehensiveness, high frequency, and availability with a short time lag, MFS often serve as input to other datasets.

A1.5. This appendix provides an overview of similarities and differences in coverage and accounting rules between MFS and the various macroeconomic statistics, before describing the linkages between MFS and GFS, and MFS and external sector statistics. Where differences exist, advice is provided on how to reconcile the data.

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[1] See Dziobek and Tanase, *Institutional cooperation between central banks and the statistical offices for producing macroeconomic statistics*, IFC Bulletin No 28, August 2008.

II. Overview of Coverage and Accounting Rules

A1.6. The basic principles and concepts underlying monetary and financial statistics are, in principle, consistent with the *2008 SNA* which provides the conceptual framework for national accounts. The *BPM6* serves as the standard framework for statistics on the transactions and stock positions between an economy and the rest of the world. The *GFSM2014* provides guidelines on compiling statistics for the fiscal sector, i.e. the general government, its subsectors, and the public sector. These manuals are also harmonized with the *2008 SNA.*

A1.7. The statistical principles and concepts in all these manuals are defined, in principle, in a consistent manner. The delineation of resident and nonresident entities; sectoring of the domestic economy; and definitions and classifications of the various categories of nonfinancial and financial assets and liabilities, are the same or are easily reconcilable. The accounting rules are the same with respect to the basis of recording and valuation. The accrual basis of recording of flows and stock positions is used consistently in all datasets.

A1.8. The identification of institutional units and their sectoring and subsequent level of sub-sectoring are conceptually the same in all macroeconomic datasets except that this *Manual* introduces the concept of "depository corporations" (DCs). The latter differs from the concept of deposit-taking corporations in the national accounts and balance of payments through the inclusion of money market funds within the DCs subsector. The general government sector in this *Manual* is defined identically to the general government sector in the national accounts, balance of payments, and GFS. Although the "public sector" is not one of the five primary sectors in the SNA, it is acknowledged as a sector in GFS, but not in MFS; the latter puts a particular emphasis on central government, a subsector of general government.[2]

A1.9. As a result of focusing on the activities and balance sheets of specific sectors and most relevant concepts in each case, some differences in the recording of activities, positions, and flows may arise between various macroeconomic datasets. These differences are, however, exceptions from the general principles, given that the conceptual standards applicable across related datasets are harmonized. Where differences in the data exist, reconciliation of the differences should routinely be made.

III. Linkages between MFS and GFS

A1.10. Linkages between monetary statistics and GFS originate from the fact that governments, as clients of financial institutions, often place surplus funds in accounts held at financial corporations (FCs). For instance, in most countries, central government has accounts at the central bank where its day-to-day surpluses are deposited. Vice-versa, FCs often invest their surplus resources in debt instruments, such as debt securities issued by governments. Government may also borrow from FCs to fund its net borrowing requirement. These transactions will result in either a net claim of government on the FCs, or a net claim of these corporations on government. The net asset/liability position between the general/central government sector and the FCs sector should be consistent, or, at least, reconcilable as

[2] The public sector is defined in Chapter XIX of the *2008 SNA*, and that definition is identical to the definition in Chapter 2 of *GFSM2014.*

compiled from both sides. The extent to which these data are consistent is a good indicator of the consistency in macroeconomic statistics in a country.

A1.11. Differences in the amounts reported as change in net claims between the government sector and the FCs sector can be used to check the accuracy/consistency of the respective data sets.

A1.12. The Data Quality Assessment Framework (DQAF)[3] used for the Reports on Observation of Standards and Codes–Data Module spells out (in Section 4.2.3–Consistency with other statistical frameworks) which consistency checks should be performed between monetary statistics and GFS:

(a) The central government's records on the government deposits in, and government borrowing from, the DCs in GFS are largely consistent with the comparable data in monetary statistics (DQAF for monetary statistics);

(b) FCs' data (usually compiled by the central bank) are often used as the preferred fiscal measure, especially sub-annually. If the two sets of numbers are different, the reasons for the difference must be ascertained, and documentation provided on the size and reasons for the discrepancy (DQAF for GFS).

A1.13. Reasons for differences between the two sets of data can often be found in:

(a) Coverage. In many economies, governments have numerous accounts held in several financial institutions. Both datasets should include the same institutional units in the general/central government data and monetary data. Differences may arise if central government has accounts with a FC, but this financial institution is not covered in the monetary statistics. Another more common case is when certain government units have accounts with FCs and the monetary statistics cover these accounts, but the accounts of these government units are not covered in the GFS, because the GFS data are confined to budgetary accounts, thereby not covering the data of the extrabudgetary units. Also, central government may hold a number of dormant accounts that are not included in GFS, but are appropriately included in monetary statistics.

(b) Sectoring. Some of the institutional units may not be identified and sectored appropriately as general/central government in the FCs' accounts and may lead to inconsistencies in the two datasets. For example, an account held for externally-financed projects and foreign grants may not be designated appropriately as a government account in FCs' records.

(c) Classification and coverage of financial instruments. The classification of financial instruments included in financial assets and liabilities may differ, or an instrument may not be consistently classified in the two systems. Differences may arise, for example, when an instrument such as accounts receivable/payable is not treated in the same way

[3] All DQAF-related materials are available at: http://www.imf.org/external/np/sta/dsbb/2003/eng/dqaf.htm#II.

in the data, or when a loan is incorrectly reported as equity investment in one of the data sets.[4]

(d) Time of recording. The time of recording (e.g., because of complementary recording periods) used in government accounting may result in transactions being recorded at a time other than when economic ownership changes hands.

(e) Accrual versus cash recording. Conceptually both data sets should be recorded on an accrual basis. GFS compilers often use cash-based data as a proxy for data compiled on an accrual basis. The FCs sector is often implementing accrual recording of transactions and stock positions. In addition, certain items are not accrued correctly within the time when the economic event occurred.

(f) Valuation. Conceptually both data sets should follow the same valuation principles, but national practices may differ. Where valuation differences in source data exist, differences may occur between the monetary statistics and GFS, unless valuation adjustments are made when the respective data sets are prepared. In particular, FCs' holdings of debt securities issued by the central government are recorded at market/fair value in monetary statistics, but may be recorded at nominal value in GFS.

(g) Holders of debt instruments. As issuers of debt securities, governments often have no knowledge or record of transactions in the secondary market. The sectors holding such debt securities can usually be determined by surveying the ultimate purchasers or by using data from a centralized securities depository. These instruments are often held by nominees of the FCs sector which may complicate the identification of the actual creditors of the government. The complexity of determining current ownership of tradable instruments may, therefore, introduce inconsistency in the data between monetary statistics and GFS.

IV. Linkages between MFS and External Sector Statistics

A1.14. This *Manual* and the *BPM6* are consistent on issues such as the definition and delineation of resident and nonresident entities, time of recording of transactions and other flows, the classification and valuation of financial assets and liabilities, and data aggregation and consolidation. Monetary data are often used as source data for compiling external sector statistics. Differences between the two systems in the areas discussed below may pose limitations on the use of monetary statistics as input data for compiling the financial account of the balance of payments, international investment position (IIP), and the external debt statistics.

A1.15. Sectoring and coverage. One significant difference between this *Manual* and *BPM6* concerns the treatment of money market funds (MMFs) which are part of the other depository corporations (ODCs) subsector in monetary statistics, but part of the other FCs (OFCs)

[4] In cases where government provides funds to FCs and records this transaction as a reduction in its assets (i.e., recorded as an expense in government accounts), the receiving FC should record an increase in its equity.

subsector in *BPM6*. This is due to a difference between the two systems in the delineation of FCs subsectors and the sectoring of MMFs.

A1.16. In this *Manual*, all FCs that issue liabilities included in broad money are designated as DCs. These include the central bank subsector, the other deposit-taking corporations, and money market funds (MMFs). The latter two form the ODCs subsector. All other FCs are designated as OFCs. In *BPM6*, MMFs are included in the OFCs subsector and are not identified separately.

A1.17. If monetary statistics are used by the external sector statistics compilers, they should, therefore, request separate data on MMFs' balance of payments transactions and IIP, in order to classify correctly financial transactions and positions within the OFCs subsector. The external sector statistics compilers should also confirm the institutional coverage of the deposit-taking corporations subsector as some deposit-takers may be excluded. For instance, offshore banks that do not accept deposits from residents are still considered deposit-taking institutions in *BPM6,* but are classified as OFCs in the monetary statistics.

A1.18. Classification of financial instruments. The major categories for financial assets and liabilities in this *Manual* follow the financial instruments classification in the *2008 SNA* and *BPM6* although the level of additional breakdowns of the major categories differ between the monetary statistics and *BPM6*. However, *BPM6* classifies financial instruments by functional category (see paragraph A1.22).

A1.19. *Classification by maturity.* The sectoral balance sheets and analytical surveys in monetary statistics do not classify loans and debt securities by maturity, although the SRFs include a maturity breakdown for central bank liabilities to nonresidents. In *BPM6*, currency and deposits, loans, trade credits and advances, other receivable/payable-other, and debt securities are classified by maturity into short-term (original maturity of one year or less) and long-term.

A1.20. *Classification by currency of denomination*. This *Manual* requires a breakdown of all instruments, financial assets and liabilities, except equity liabilities, into domestic currency and foreign currency; *BPM6* recommends a breakdown in the IIP of all debt assets and all debt liabilities by major currency.

A1.21. Valuation. The valuation principles and other accounting rules in this *Manual* are generally in agreement with those in *BPM6*. A feature of monetary statistics is the disaggregation of liability equity and investment fund shares into categories by types of equity resources (i.e., funds contributed by owners, retained earnings, current year result, general and special reserves, and valuation adjustments) which are recorded at book value. Although this approach does not appear as a standard classification and valuation of liability equity in the *BPM6*, it is consistent with the approach called *own funds at book value* (see *BPM6*, paragraph 7.16e). In contrast, the standard approach in *BPM6* is to value equity securities (for both assets and liabilities) at market or fair value with the identification of nonresident holdings within the standard presentation.

A1.22. To meet the data needs (concerning equity liabilities) for compiling the financial statistics, including the financial account of the *SNA*, the SRFs contain a memorandum item requesting the market or fair value of equity by counterpart sector. The majority of countries do not report this memorandum item, however, implying that this information is not compiled by the monetary statisticians. To solve this situation, the IIP compiler (who often does possess data on equity liabilities to nonresidents) should coordinate with their monetary statistics counterparts to promote the compilation of the SRF memorandum item and, thus avoid duplication of efforts or excessive reporting burden on financial institutions. Furthermore, foreign liabilities in the monetary statistics are underestimated, because of the use of book value and the presentation by component of equity (without a breakdown by counterpart holder), hence the importance of the memorandum item to identify this underestimation.

A1.23. Functional categories. In general, monetary statistics do not use functional categories to classify financial assets and liabilities or economic sectors.[5] This can pose compilation challenges where monetary statistics are used to estimate balance of payments/IIP data on direct investment for deposit-takers and for OFCs.

A1.24. The *BPM6 Compilation Guide* Appendix 6 contains a reconciliation exercise between balance of payments and monetary statistics. Table 6.1 shows how the sectoral balance sheet data for ODCs can be used for the "deposit-taking corporations, except for the central bank" subsector of the IIP. Although the sectoral balance sheet data of ODCs correspond largely with IIP components, the differences in the classification do not allow a full reconciliation of the two datasets. Table 6.2 shows how sectoral balance sheet data for the central bank can be used to compile data for the central bank subsector in the IIP.[6]

[5] Exceptions relate to: (i) classification of external claims as reserve assets; (ii) classification of central bank liabilities as part of monetary base; and (iii) classification of depository corporations' liabilities as part of broad money.

[6] If countries complete the sectoral balance sheet for OFCs, it can be a basis for compiling IIP data for *Other sectors - other financial corporations*.