

---

**PART II**

**Compilation—Principles and Practice**

# 10. Overview of Data Compilation

## Introduction

**10.1** External debt statistics can be compiled from a variety of sources, using a range of methods. Statistics can be collected from the debtor, from the creditor, or indirectly through information from financial intermediaries in the form of surveys, regulatory reports, and/or from other government administrative records. But a precondition for reliable and timely statistics is that the country has a strong and well-organized institutional setting for the compilation of statistics on public debt—so that all public and publicly guaranteed debt is well monitored and managed (see UNCTAD, 1993)—and private debt, and for the compilation of aggregate external debt statistics.

**10.2** This chapter considers some of the important institutional issues that need to be addressed when undertaking the compilation of external debt statistics, and the strategies that need to be considered as the regulatory environment for financial transactions changes. In particular, it emphasizes the need for a coordination of effort among official agencies, with one agency having overall responsibility for compiling and disseminating external debt statistics for the whole economy, and for appropriate legal backing for statistics collection.

**10.3** Subsequent chapters provide practical guidance on how external debt statistics might be collected and compiled. They are not intended to be comprehensive. Indeed, some elements of external debt statistics are easier to collect and compile than others. For instance, compiling external debt statistics on, say, a government's foreign currency loan from a group of nonresident banks is more straightforward than, say, collecting information on nonresident ownership of a government's domestic bond issues. But both sets of statistics are required. It is particularly difficult to obtain statistics on nonresident ownership of traded securities, especially

instruments that are not registered—so-called bearer instruments—and so a separate chapter is devoted to this issue. Examples of country practices in compiling and using external debt statistics are provided in Chapter 14.

## Coordination Among Official Agencies

**10.4** If the responsibility for debt compilation is shared between several agencies, it should be clearly established which agency has the primary responsibility for compiling external debt statistics—the central compiling agency. Responsibility could be assigned through a statistical law or other statutory provision, interagency protocols, executive decrees, etc.

**10.5** This chapter does not recommend which institution within an economy should be responsible for compiling and disseminating external debt statistics. This is dependent on the institutional arrangements within the economy. Nonetheless, it is likely that the central compiling agency is either the central bank, the ministry of finance, an independent debt-management office, or a national statistical agency.<sup>1</sup> One approach is to establish the agency in charge of compiling data for the balance of payments and IIP as the central compiling agency for external debt, so promoting consistency among these three related sets of data. Indeed, as noted in Chapter 7, reconciliation of external debt statistics with the financial account of the balance of payments provides a good consistency check, as well as analytically useful information.

**10.6** In whatever way the statistics are to be collected and compiled—and invariably a range of

<sup>1</sup>A national statistical agency may be a user of the debt data, in the sense that the data are communicated by the ministry of finance and/or the central bank to the national statistical agency for publication.

methods and approaches will be adopted—the process will be resource intensive. Thus, where there is more than one agency involved in the compilation of external debt statistics, there should be a cooperative effort, avoiding duplication of effort and ensuring as far as possible consistency of approach across related data series. With modern computerized techniques, different units can be connected through computer networks facilitating the specialization of the different institutions concerned, without hindering data reporting and compilation. In this regard, procedures to ensure, as far as possible, smooth and timely flows of data between data compiling agencies are essential.

**10.7** It is important to ensure that there are well-established contacts between the staff of the different agencies, so that any problems or difficulties can be dealt with in an expeditious manner, and that there is an avoidance of duplication of data coverage in the different institutions. One way of encouraging cooperation, developing contacts, and resolving problems that arise is to hold regular meetings among staff of the various agencies at the working level. Not only could these meetings help resolve problems that might be arising, but there would also be an opportunity to notify each other of upcoming developments and possible future enhancements or changes to collection systems. This type of cooperation helps ideas to spread and improvements to be made, allows institutions to understand each other's position, and helps build important personal contacts.

**10.8** Also, if external debt statistics are collected by different agencies, there are a number of considerations that must be borne in mind. First, the concepts used and instruments presented should be consistent, or at least reconcilable. So, in merging together various sources, the central compiling agency must ensure that other contributing agencies are aware of, and supply statistics that are consistent with, core concepts and presentation requirements (such as residence, valuation, etc.) as outlined in the *Guide*. Indeed, the central agency should develop expertise in these standards and, in a sense, act as their guardian within the economy. Also, there are other presentations outlined in the *Guide* that policymakers and other users may encourage compilers to disseminate, or that may need to be compiled to meet international commitments. The data compilers in the central compiling agency will need to ensure that

statistics supplied by the other agencies meet the requirements for these other presentations—both in terms of the coverage as well as the periodicity and timeliness on which these statistics have to be provided.

**10.9** Further, it is recommended that, as far as possible, comparison of figures with creditors be carried out on a regular basis, at least once a year, although the compiling agency will need to check whether the creditor data are being compiled on the same basis as the national data. This comparison can be undertaken either on an individual instrument basis (for example, individual government loans) by the agency responsible for compiling these statistics or at an aggregate level using international data sets, such as the Bank for International Settlements (BIS) International Banking Statistics and the *Joint BIS-IMF-OECD-World Bank Statistics on External Debt* (see Chapter 17).

**10.10** There should be mechanisms to ensure that the compiled external debt data continue to meet the needs of policymakers and other users. Meetings could be periodically convened with policymakers and other data users to review the comprehensiveness of the external sector statistics and to identify any emerging data requirements. New initiatives could be discussed with policy departments and statistical advisory group(s); such discussions provide scope for seeking additional resources. From these discussions, and in consultation with both users and other compiling agencies, the central compiling agency might devise a strategic plan to improve the quality and coverage of external debt statistics.

## Resources

**10.11** Resource allocation decisions are the preserve of the authorities in each economy and should be periodically reviewed. Nonetheless, the authorities are encouraged to provide at least adequate resources to perform existing tasks—that is, adequate staff, financial, and computing resources. In particular, key staff should be knowledgeable and well-versed in external debt concepts and compilation methods, and a core contingent of trained external debt statisticians should be retained at any point in time. Instructions for performing existing tasks should be maintained. New compilers could be pro-

vided formal and on-the-job training in external debt compilation methods, including international statistical standards and system procedures for handling and processing of data.

## Legal Backing for Data Collection

**10.12** When the authorities closely regulate foreign borrowing, external debt data may well be a by-product of the regulatory system. But as liberalization of financial flows proceeds, the comprehensiveness of information from regulatory reports may be reduced, and it may become harder to identify entities engaged in external debt transactions. So the need to approach the private sector directly for statistical purposes increases. Without appropriate legal backing, it may be very difficult to acquire the required information from private sector entities.

**10.13** Obtaining appropriate legal support for statistics collection could be a complicated and lengthy process that is likely to be undertaken infrequently. Given this, a first step should be to determine whether there is any existing legal support for statistics collection that could be employed to acquire the required information. If not, and it is considered necessary to seek additional legal support, the need may well run wider than “just” the collection of external debt data. Indeed, in an environment of liberalization, a comprehensive review of the sources of statistical information and the legal support needed might be required.

**10.14** The terms of legal backing for the collection of statistical information vary from country to country, depending, not least, on the institutional arrangements and the historical development of statistical gathering. Nonetheless, some elements typically covered include:

- The designation of the type of entities that the compiling agency can approach for data (for example, entities in the private business sector) and for what purpose (for example, to monitor economic activity and financial transactions).
- The boundaries of the compiling agency’s responsibilities, without being so restrictive that the agency does not have the freedom to adapt as a new development emerges (for example, financial derivatives).
- The possibility of imposing penalties on respondents for nonresponse, which should be accompa-

nied by an appropriate legal mechanism for enforcement.<sup>2</sup>

- A clear statement that information supplied by individual entities would not be separately disclosed and would only be published in the form of statistical aggregates (except, perhaps, where explicit permission is given from an individual entity to disclose information), along with appropriate penalties for the compiling agency and, in particular, individual employees, if such information is disclosed.
- A prohibition on the use by the authorities of information supplied by individual entities for any purpose other than statistics compilation, thus establishing the independence of the statistics compilation function from other government activity (for example, taxation authorities). The prohibition should be supported by penalties and a mechanism for their enforcement.
- A prohibition on other government agencies influencing the content of statistics releases.<sup>3</sup>
- The establishment of an oversight committee of independent experts to help ensure the professionalism and objectivity of the compiling agency.

**10.15** With such legal backing, the statistics compiler would have the necessary support for the collection of information from enterprises and commercial banks. Nonetheless, the compiler should not rely solely on legal backing but rather use the legal backing to help and encourage the private sector to report.

## Collection Techniques at Different Stages of Liberalization

**10.16** As mentioned above, liberalizing financial transactions is likely to affect the information available from statistical reports.<sup>4</sup> Provided that liberalization proceeds on a step-by-step basis, the agency or agencies responsible for external statis-

<sup>2</sup>Consideration might also be given to the possibility of imposing penalties on respondents for misreporting (that is, intentionally providing incorrect data).

<sup>3</sup>Data integrity is very important for the statistical function. Where compiling agencies have an operational as well as recording function, consideration might be given to delineating functions so that the statistical function operates at “arm’s length” from other functions.

<sup>4</sup>This section draws on Forum for International Development Economics (1998).

tics, including external debt, should develop a strategy to ensure that good-quality statistics continue to be compiled and disseminated. Part of this strategy involves considering whether there is a need to strengthen the statistical infrastructure, as discussed above—the need for legal backing and for improved cooperation and a clear distribution of compilation responsibilities among the various interested compiling agencies. But collection techniques also need to be considered. Figure 10.1 provides a stylized view of the techniques that can be used as the process of economic liberalization proceeds.

**10.17** In Figure 10.1, in an environment with strict controls, data are provided primarily from administrative sources, such as foreign investment boards, and from commercial banks, for their own and their domestic clients' transactions. As financial transactions are increasingly liberalized, the information that enterprises need to report directly increases, in terms of the number of enterprises and the information required. The information provided by the public sector and commercial banks on their own debt remains broadly unchanged throughout.

**10.18** In a partially liberalized environment, when some enterprises begin to get greater freedom to borrow abroad, the comprehensiveness of the traditional administrative and commercial bank sources of information is reduced. Commercial banks may remain a valuable source of information on their clients' activities, but there could well be a need to supplement this data source by requiring reports from those enterprises given permission to borrow directly abroad—that is, undertaking external transactions without involving the domestic commercial banks. For instance, those borrowing directly abroad could be asked to report on individual borrowings as they are undertaken (that is, to provide information on external debt only) and/or be asked to report periodically on a survey form that covers external assets and liabilities and any associated income flows.

**10.19** As liberalization proceeds—and the statistical agency becomes less dependent on administrative and commercial bank sources, and more dependent on obtaining the necessary information from private enterprises—its job becomes more complex. The statistical agency or agencies will need to develop and/or deepen the necessary human skills needed to compile data in a more liberalized environment,

including for a core set of staff.<sup>5</sup> These include developing skills in conducting surveys, in developing and maintaining a register of companies, and in quality control as well as enhancing knowledge of the basic conceptual framework. The partial liberalization phase could provide an opportunity to develop these capabilities in an environment where the traditional sources of information are still relevant, albeit to a lesser extent.

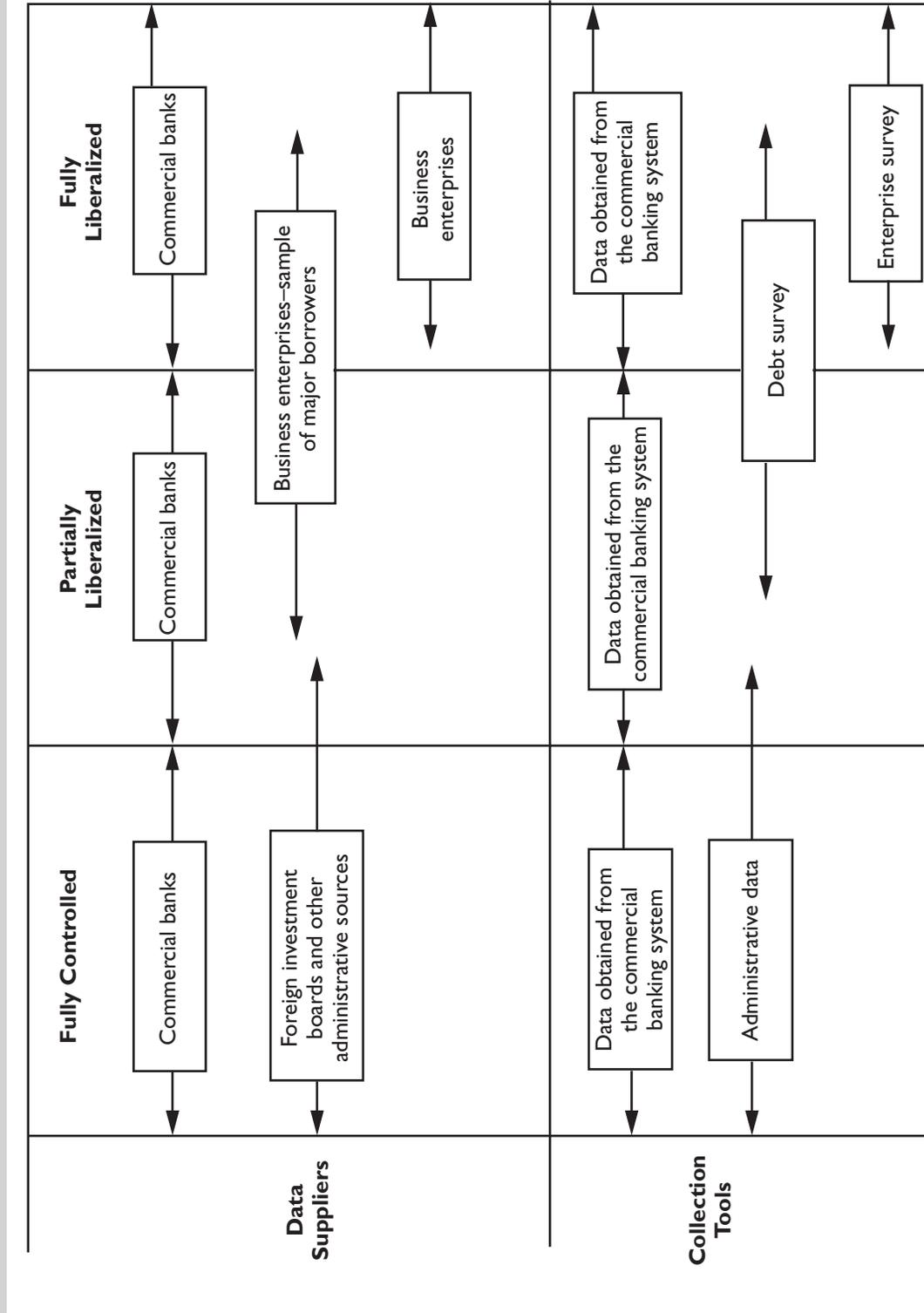
**10.20** The idea of a phased approach allows the statistical agency, or agencies, to develop the capabilities required for these changed circumstances over time. Given that there will be difficulties and costs in undertaking the institutional changes required, a phased approach could help minimize these costs for all concerned.

**10.21** Whether a country wants to take a phased approach to the implementation of detailed reporting of the foreign activities of private enterprises might depend on a range of factors including the resources and legal backing it has for conducting surveys. But by the time an economy fully liberalizes capital movements, it is important that the statistical agency or agencies have in place the capability to monitor the foreign activities of the private sector. Otherwise, economic policymakers and private sector investors might be misled into underestimating the degree to which private enterprises have accumulated external debt, with consequential negative repercussions for the economy at a later stage.

**10.22** Finally, if it is decided that a new system is required both for balance of payments and external debt, perhaps because circumstances have changed such that there is a significant weakening of the reliability of traditional sources of information, it is important that the objectives for the new system are established at the start. For instance, the timeliness and frequency of results need to be determined because these could affect both the types of survey and the resources required. Similarly, the importance of the data to policymakers needs to be ascertained because any collection needs to be considered within

<sup>5</sup>One of the potential benefits of compiling external debt statistics in conformity with other macroeconomic data series is that staff mobility can be enhanced. For instance, basic conceptual knowledge and compilation skills developed for a related set of macroeconomic data can also be relevant for external debt statistics, and vice versa.

Figure 10.1. Data Suppliers and Collection Tools in Different Policy Environments



Source: Forum for International Development Economics (1998).  
 Note: It is assumed that the degree of control declines continuously from left to right.

the context of overall statistical priorities. Inevitably, resources in the compiling agency and among respondents are limited.

### **Dissemination of External Debt Statistics**

**10.23** The compilation of external debt statistics is undertaken for the ultimate purpose of making these data available to policymakers and other users. Data should be publicly disseminated on a frequent and timely basis, preferably according to a well-established, preannounced release schedule. The dissemination of data could be in print and/or electronic form. As part of the dissemination process, the concepts, definitions, classifications, and methodology used should be documented and disseminated in publication form at regular intervals. This metadata could also identify any significant deviations from internationally accepted standards, biases in the data, and information about response rates to the

main surveys employed in collecting external debt statistics.

**10.24** Invariably, to meet the legitimate needs of users, data will be published that could well be subject to later revision. In such instances, users should be alerted that the initially published data are preliminary and may be subject to revision. If revised data are later published, users should be informed of the revisions, with explanations. Also, if major changes to the statistical methodology are to be implemented, it is strongly recommended that users be given advance warning, and sufficient back runs of data provided after the revisions have been published.

**10.25** In general, providing the user with such information is likely to engender greater confidence in the statistics and may help encourage a “culture of reporting” to the compiling agency(ies), an issue discussed in Chapter 12, and one that is of universal concern to compilers.

# II. Government and Public Sector Debt Statistics

## Introduction

**11.1** The *Guide* recommends that the collection of data on a government's external debt be linked to the work of those responsible for managing the government's debt position, for the purposes of administrative efficiency and quality control. Those responsible for government debt are invariably a government debt office, either within the ministry of finance or constituted as a separate agency within the government sector, or the central bank, or another government agency. For reasons outlined in the previous chapter, it is also important that the agency responsible for government data cooperate, as appropriate, with any other agencies involved with the compilation of external debt data.

**11.2** It is critical to the smooth functioning of a government debt office that the compilation, recording, and dissemination of debt data be undertaken in a timely and comprehensive manner. Proper records of debt are an absolutely essential foundation for effective debt management, and the availability of accurate and up-to-date data indeed determines how effectively the debt office can carry out its other functions—be they operational or analytical. The range of these functions is described in the appendix to this chapter.

**11.3** Comprehensive and timely data allow the debt office to monitor the evolution of a country's external liabilities and its debt-service obligations over time; can provide early warning signals of possible debt-servicing problems; and serve as essential inputs for government budget preparation, for approval by parliament, for execution, as well as for compiling balance of payments and IIP statistics and for making projections. The debt office should be adequately resourced to properly carry out the tasks of compiling and recording data on all government borrowings. It is recommended that the compiler of external debt statistics, if outside the debt office, utilize these data rather than develop alternative sources.

## How Should Data Be Collected and Compiled by the Debt Office?

**11.4** To establish a proper debt record, detailed information about all loans (and other types of borrowing such as bonds, export credits, etc.) and all related transactions needs to be compiled. The debt office should capture data on all public and publicly guaranteed debt. This is why it is very important that the agency collecting information on public and publicly guaranteed debt be the same as the one in charge of servicing or ordering payments.

**11.5** For those economies that may not have proper records of debt data, there may be a need to first compile a thorough inventory of existing debt in order to establish the debt stock, including any arrears that have accumulated on principal and interest. Once the debt stock is known, procedures should be put in place to obtain, on a regular basis, information on existing and new borrowing, as well as information on other transactions that affect the debt stock. There may be a need to establish formalized institutional arrangements for the comprehensive and timely flow of information to the debt office. Table 11.1 gives a list of the types of detailed information that should be compiled. This table is explained in more detail below.

**11.6** For the purposes of the debt office and its functions, data compilation should be undertaken on an instrument-by-instrument basis, tranche by tranche, and in its original currency. For each borrowing instrument, there are basically three types of information that need to be compiled: (1) the core information on details and terms that will produce the amortization and disbursements tables; (2) data on actual disbursements, as well as the changes in the committed undisbursed amount if, say, there are cancellations and/or increases (for example, with a project loan); and (3) actual debt-service transactions. There are other types of information required, and

Table I I. I. Information To Be Compiled on Each Instrument

Type of Information	Description
<b>I. Details of Borrowing Instrument</b>	
Purpose of borrowing	Descriptive title
Agreement date	Date agreement has been signed
Type of instrument	Type of borrowing instrument
Effective date	Date borrowing becomes effective
Type of borrowing	Whether single currency or multi-currency or multi-tranche
Amount borrowed	Original amount borrowed or revised amount after cancellation or enhancement
Currency of borrowing	Original currency, and currencies of disbursement and repayments
Participants	
• Borrower	Whether government, public enterprises, or private sector
• Implementing agency	Agency in charge of implementing project
• Creditor	Name and type of creditor (multilateral, bilateral, etc.)
• Disbursement agency	Name, if different from lender
• Creditor insurer	Name and country
Guarantee status	Borrowing by public enterprises or the private sector guaranteed by government, and percentage guaranteed
Insured	Whether borrowing is insured by export guarantee agency in creditor country and percentage guaranteed
Economic sector	Economic sector receiving borrowing
Use of funds	Whether to finance a project, etc.
<b>II. Disbursements</b>	
Disbursement period	Period during which disbursement is to take place
Method of disbursement	Such as direct disbursement or reimbursement
Expected disbursement pattern/profile	Forecast of how the borrowing will be disbursed
Actual disbursement	Currencies and amount of each disbursement taking place
<b>III. Borrowing Terms</b>	
Interest	Information on interest charged should include: <ul style="list-style-type: none"> <li>• Interest type: fixed or variable rate</li> <li>• For variable rate: specify interest base/reference and margin/spread</li> <li>• Interest period: dates of payments</li> <li>• Basis for interest calculation (conversion factor: daily/monthly/semiannual/annual, etc.)</li> <li>• Months: actual number of days or 30-day month</li> <li>• Days in interest year (360/365)</li> </ul>
Commitment fee	Rate levied on undisbursed (full or partial) amount
Penalty fees	Charges for late payment of interest and principal
Other fees	Such as agency fee, management fee, front-end fee
Principal	Maturity: repayment period/profile Type of repayment: bullet, equal or annuity-based, etc.
<b>IV. Actual Debt-Service Payments</b>	
	For each payment (of interest, principal, other charges) made: <ul style="list-style-type: none"> <li>• Date, currency, and currency of transaction; amount of transaction in original currency, currency of transaction, domestic currency, and perhaps U.S. dollar and SDR</li> </ul> For multicurrency borrowing: equivalent amount paid in borrowing currency
<b>V. Exchange Rate</b>	
	Exchange rates on each transaction date for relevant currency vis-à-vis the local currency Exchange rates for end of period (daily, weekly, month, quarter, year)
<b>VI. Interest Rates</b>	
	Prevailing variable interest rates of base/reference rate used by the creditor for each interest period
<b>VII. Debt Restructuring</b>	
	<ul style="list-style-type: none"> <li>• Changes in terms as a result of debt reorganization, through rescheduling, refinancing (voluntary or involuntary), write-off, etc.</li> <li>• Date required: <ul style="list-style-type: none"> <li>–Debt concerned; arrears, consolidation period</li> <li>–Debt-relief terms (debt forgiveness, reschedule)</li> <li>–Terms for rescheduled debt (applicable interest rate, repayment profile)</li> <li>–Transactions on actual debt-service payments or for rescheduled debt</li> <li>–Other transactions from buyback or conversion/swap</li> </ul> </li> </ul>
<b>VIII. Financial Derivatives</b>	
	<ul style="list-style-type: none"> <li>• Transactions arising from financial derivatives contracts</li> <li>• Positions measured both in market value and notional amounts in forwards (including swaps) and options</li> </ul>

these are described below (under the heading “Additional Data Requirements”).

**11.7** If the debt instrument is tradable, and nonresidents are allowed by the government to purchase it, additional information will be required in order to attribute ownership by residency. This information may come from a different agency, which is responsible for capturing information on the nonresident ownership of traded securities. Methods of capturing information on nonresident ownership of traded securities are set out in Chapter 13.

### Basic Details and Terms of the Borrowing

**11.8** Basic information on each debt instrument should normally be available from the loan or credit agreement or related documentation, a copy of which should be deposited—preferably under legal statute—with the debt office for all public or publicly guaranteed debt instruments. As well as compiling data on the amount committed and the currency, where possible, details are also required on the borrower, the creditor and creditor category (government, bank, multilateral institution, etc.), the disbursement agency, the implementing agencies, and the currencies of disbursement and debt service. Data on the purpose or the end use of the amount borrowed (institutional sector and use of funds) are also important for analyzing the sectors that have benefited from the borrowing, while the guarantee status of the debt instrument will help assess the exposure of the government through the extension of guarantees to other borrowing entities.

**11.9** In addition to the above, details on the terms of the borrowing should also be compiled, especially any grace period and the maturity date(s), interest rates (variable or fixed) and any fees that are to be paid, and the dates for payments of interest and the type of repayment profile of principal. Information on the terms allows the debt office to forecast the debt-service requirements for each borrowing instrument. In the case of bonds, information such as the issue price and the yield would need to be captured as well.

### Disbursements

**11.10** The debt office will also need to compile information on disbursements, including actual and

expected disbursements. From such information, to the extent possible, accurate projections of debt service can be made. Clearly, actual disbursements affect the total of the undisbursed amounts and, in many cases, the expected future pattern of disbursement. Data on disbursements can usually be obtained from project-implementing agencies and creditors (on an instrument-by-instrument basis or for groups of instruments).

**11.11** Because different types of borrowings can be disbursed in various ways, the task of compiling disbursement data can be complex. For instance, in the case of project loans, disbursement can take the form of advances to the borrowing entity, direct payment by the lender to suppliers of goods and services, or on the reimbursement basis after the borrower has already paid the suppliers. The timing of the disbursement under these methods is different. Under the advances approach, it is the periodic payments by the lender to the borrowing government that constitutes disbursement; under the direct payment approach, it is the moment when the lender pays the supplier; and under the reimbursement approach, it is when reimbursements are made to the borrowing government. The debt office must keep track of these transactions and reconcile its records at regular intervals with information maintained by the project-implementing agencies.

### Debt-Service Payments

**11.12** All data on debt-service payments need to be compiled on a regular and timely basis. Information such as principal repayments, interest payments, commitment fees, service fees, and other fees and charges (including penalty fees) will not only allow the debt office to ensure that payments due are made on time, but also enable it to track those debt instruments that are in arrears. Debt-service data can be obtained from statements sent by creditors. For government loans, information can also be provided by those responsible for making the payments, such as the accountant general or the foreign payment department in the central bank. Debt service on public enterprises’ debts can be obtained directly from the borrowing entity or through a unit in the ministry of finance, which monitors this category of debt. Data for private debt that is guaranteed by the government can be obtained through a reporting mechanism agreed upon when guarantees are originally sought.

**11.13** Where the debt office is at the center of the government's financial administration and public sector control system, the debt office itself orders the payment for budget execution, triggering at the same time the formal accounting procedures within the government for public debt service. This framework, known as an Integrated Financial Management System (IFMS), is frequently implemented in projects financed by the World Bank, or other regional development banks, through loans for modernization of the public sector. This interface with the budget execution is not only on the expenditure side—that is, debt service—but also on the revenue side; when a deposit in the treasury accounts is made from the proceeds of a debt instrument, the debt office alerts the budget and the treasury of the availability of resources.

### Additional Data Requirements

#### *Exchange rates and interest rates*

**11.14** Given that debts can be contracted in various currencies, it is important that the debt office collect and maintains information on the relevant exchange rates for all currencies in which borrowing has taken place, and those related to financial derivatives contracts in foreign currency. This information should be compiled on a regular basis, including for dates on which transactions have occurred and for end-periods (month, quarter, year, and, for certain short-term instruments, perhaps weekly). This is necessary because the disbursements and the debt-service operations should be recorded in the original currency, the currency of transaction (if different from the original one), and the domestic currency. For those instruments bearing variable interest rates, all relevant base rates should be compiled for each interest period, thus enabling the debt office to project the debt-service requirements with respect to these instruments. If data on exchange and variable interest rates are to be compiled on a daily basis, it is highly convenient to have a specialized computerized service on-line to obtain this information.

#### *Changes in debt instrument amounts and debt restructuring*

**11.15** Information on any changes to individual debt instruments such as enhancements or cancellation of the amount, or a reorganization of the debt through rescheduling, debt forgiveness, refinancing, or prepayments should also be compiled. Indeed, in

this *Guide* a change in the terms of a loan agreement results in a new instrument being created. For instance, for countries that have completed the Paris Club round of discussions, all relevant information on the restructuring provided in the Agreed Minute, the bilateral agreements, and billing statements (with respect to rescheduled debt) should be compiled. Similarly, information on debt reduction given through discounts on debt buybacks should be maintained. Debt office representation at the negotiation processes would help ensure that this kind of information is correctly recorded.

#### *Data on financial derivatives transactions*

**11.16** Though financial derivatives are not debt per se, they have implications for debt management. For those countries where borrowers use financial derivatives to manage their risk exposures, data on transactions arising from these contracts should be compiled and recorded, as well as positions on outstanding contracts, in both market value and notional amounts. Because financial derivatives can create additional external liabilities, their market value needs to be monitored on an ongoing basis. Any direct increase in debt-service costs arising from hedging using financial derivatives (for example, commission expenses) should be registered.

### How Should Information Be Stored?

**11.17** A debt office should store information in an efficient and comprehensive computer-based debt-management system (CBDMS) that can undertake a number of tasks and so support both operational and policy functions. Table 11.2 sets out the typical tasks that a CBDMS should be able to undertake. A good CBDMS can also be used to store and retrieve information on private sector external debt.

### How Can the Debt Office Validate Data?

**11.18** Data validation is essential in ensuring the compilation of reliable, comprehensive, and timely external debt data that are essential for the management and formulation of a country's micro- and macroeconomic policies and strategies. For this reason, the *Guide* recommends that procedures be put in place at various stages of the data compilation and

**Table 11.2. What a Computer-Based Debt-Management System (CBDMS) Should Do**

Task	Requirements
Debt recording [loan-by-loan]	<p>A CBDMS should be able to maintain a comprehensive inventory of loan information:</p> <ul style="list-style-type: none"> <li>• Records of loan agreement details—loan title, borrower, creditor, amount, currency, purpose, sector; conditions attached, creditor bank, other parties, etc.</li> <li>• Records of loan terms—effective date, final maturity date, conditions preceding effectiveness, disbursement pattern, commitment fees, interest rate, other fees, repayment profile, prepayment conditions, other loan development details, etc.</li> <li>• Records of actual disbursements—i.e., records of actual loan drawdowns</li> <li>• Records of actual debt-service payments—commitment charges, interest payments, principal payments, agency/management fees, other loan charges</li> <li>• Records of debt-related data—exchange rate, interest rate, and macroeconomic variables</li> <li>• Support day-to-day debt operation functions—ensuring that payments due are paid in time, monitoring arrears, and following up on delays in loans disbursement that can lead to undue payment of commitment fees</li> </ul>
Debt reporting [loan-by-loan and on aggregate basis]	<p>A CBDMS should be flexible enough to produce a variety of debt reports that meet the requirements of users both within and outside the country:</p> <ul style="list-style-type: none"> <li>• Summary reports showing basic details of individual loans or group of loans based on any possible selection criteria</li> <li>• Summary reports on loan utilization rates—for single loans, groups of loans, or entire loan portfolio</li> <li>• Reports on debt stock based on selection criteria such as currency composition, creditor composition, maturity structure, etc.</li> <li>• Reports on debt-service profile (historical and forecast) based on selection criteria—for example, debt service falling due to specific creditors or group of creditors within a given period, debt arrears, etc.</li> <li>• Reports for direct use in the balance of payments statistics, IIP framework, Government Finance Statistics, International Finance Statistics, and Global Development Finance Statistics, etc.</li> </ul>
Debt analysis	<p>A CBDMS should be able to perform basic debt analysis:</p> <ul style="list-style-type: none"> <li>• Portfolio analysis—to carry out sensitivity tests to determine, for example, effect of variation in exchange rates and interest rates on future debt-service profile</li> <li>• Analysis on the impact of new loan offers—test the impact of new loan proposals on the debt-service profile</li> <li>• Analysis of the impact of debt-rescheduling or refinancing proposals on the debt-service profile</li> <li>• Using macroeconomic data to compute standard debt indicators—in both nominal and present-value terms</li> <li>• Compute the grant element of loans as well as the present value of debt</li> <li>• Perform basic economic simulations using macroeconomic data</li> <li>• Allow debt managers to use risk-management techniques</li> </ul>
Linkages with other packages	<p>A CBDMS should be flexible enough to interface with other systems:</p> <ul style="list-style-type: none"> <li>• Export debt data electronically to commonly used applications such as Excel and Lotus spreadsheets</li> <li>• Provide linkages to other systems for specific analysis/reporting—such as the World Bank DSM Plus and Debtor Reporting System</li> <li>• Import data such as exchange rates and interest rates from external sources</li> <li>• Interface with integrated financial management systems (IFMS). This is a paramount utilization of the CBDMS, playing the role of public credit module, in complement to the budget, treasury, public accountancy, and cash-flow for the public sector</li> </ul>

recording process to ensure that all data captured are properly validated and reconciled with other data sources. Although data provided to and supplied by the different institutions and departments—both international and domestic—should be checked for mutual consistency, these data may not be identical. But the data validation process should ensure that where differences do exist, the underlying factors for the differences are identified and explained to users of the data.

**11.19** Among the various procedures and actions that can be followed are:

- Verification by supervisors of data extracted from debt instrument agreements, other documentation, and statements and recorded in data entry sheets;
- Systems that have built-in validation procedures to check for inconsistencies at the time of the recording of the information in debt recording and management systems;

- Description of procedures for treating different types of debt and their components, including sources of data in a Debt Procedures Manual—a “how-to” manual that accumulates knowledge and passes on experiences;
- Periodic reconciliation of data obtained from one source with other sources of information—for instance, data on debt-service payments can be checked with records kept by the foreign payment department in the central bank; loan balances could also be verified with creditors and debtors on a regular basis;

- An audit mechanism that is consistent with the general rules of public finance control.

### Appendix: Functions of the Government Debt Office

**11.20** Effective debt management by a government involves seven basic functions (Table 11.3): policy, regulatory, resourcing, recording, analytical, controlling, and operating (including active portfolio management). The policy, regulatory, and resourcing

**Table 11.3. Some Recommended Functions of a Debt Office**

Functions	Public Debt		Private Debt (depending on economy)
	External	Domestic	
Policy and regulatory	<ul style="list-style-type: none"> <li>• Institutional arrangements for borrowing, disbursements, and debt service, including laws and regulations as well as policy for public guarantees</li> <li>• Establish debt sustainability standards</li> <li>• Policy Framework for Contingent Liabilities</li> <li>• Determine borrowing needs, desired terms, borrowing sources</li> </ul>	<ul style="list-style-type: none"> <li>• Formulating debt-management objectives and strategy</li> <li>• Decisions on volume, type of instruments, timing, frequency, and selling techniques</li> <li>• Where feasible, development of a benchmark debt structure</li> <li>• Communication linkages within government/cabinet/parliament</li> <li>• Fixing borrowing ceilings according to budgetary and fiscal policy goals</li> </ul>	<ul style="list-style-type: none"> <li>• Determine the policy relating to private borrowing (external) (dependent on nature of exchange regime and capital account liberalization)</li> <li>• Establish sources and institutional arrangements for monitoring private debt, short and long term</li> <li>• Policy Framework for Contingent Liabilities</li> </ul>
Recording and operations	<ul style="list-style-type: none"> <li>• All needed information flows are in place in order to gather the necessary data to cover all information needs for operations and decision making</li> <li>• Ensure appropriate budgetary provisions are made for debt and debt-service contingent liabilities and the planning of reserves for externalization</li> <li>• Checking invoices and ensuring debt service paid on due dates</li> <li>• Managing disbursements including claims for reimbursements</li> <li>• For commercial market borrower, the whole range of activities pertaining to market participation and penetration</li> </ul>	<p><i>Primary market</i></p> <ul style="list-style-type: none"> <li>• Organize distribution channels and selling procedures</li> <li>• Management of debt operations including auctions, subscriptions, etc.</li> <li>• Institutional arrangements for contacts with market</li> </ul> <p><i>Secondary market</i></p> <ul style="list-style-type: none"> <li>• Active management of government outstanding portfolio</li> <li>• Development of debt and liquid markets</li> <li>• Institutional arrangements for intervention and contacts with market</li> </ul> <p><i>Redemption</i></p> <ul style="list-style-type: none"> <li>• For both new and old issues, administration of delivery and redemption of securities</li> </ul> <p><i>Recording arrangements</i></p> <ul style="list-style-type: none"> <li>• Recording system for debt operations</li> <li>• Management of records of debt holders/stock</li> <li>• Servicing of government debt and its linkage to budgetary execution</li> <li>• Administration of register of government debt instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Where government fully responsible for foreign exchange reserves, perhaps take account of the debt-servicing needs of private sector debt in deciding on the level of foreign reserves</li> </ul>

**Table 11.3 (concluded)**

Functions	Public Debt		Private Debt (depending on economy)
	External	Domestic	
Statistical/analytical	<ul style="list-style-type: none"> <li>Maintain timely and comprehensive data on loan-by-loan basis (forecast and actual) of commitments, disbursements, debt service, arrears (held for a computerized management system)</li> <li>Generate periodic reports</li> </ul>	<ul style="list-style-type: none"> <li>Maintain timely and comprehensive data on all borrowing instruments</li> <li>Generate periodic reports</li> </ul>	<ul style="list-style-type: none"> <li>Maintain timely and comprehensive data (including short-term debt) on a loan-by-loan basis, as practicable, from various sectors such as bank, nonbank, etc. (this function might be undertaken by a statistical agency)</li> <li>Generate periodic reports</li> </ul>
Controlling/monitoring	<ul style="list-style-type: none"> <li>Monitor debt indicators and other performance criteria to ensure debt sustainability</li> <li>Undertake analysis of debt portfolio in a macroeconomic framework and IIP framework</li> <li>Analyze database for debt restructuring including rescheduling</li> <li>Undertake analysis for the purpose of risk management, especially exchange risks and other market risks</li> </ul>	<ul style="list-style-type: none"> <li>Projecting government borrowing requirements in context of fiscal and monetary targets and sustainable levels of debt</li> <li>Evaluate cost of borrowing (yields) of various instruments</li> <li>Control that the yearly ceilings are respected</li> </ul>	<ul style="list-style-type: none"> <li>Monitor debt levels, nonperforming loans, and other liabilities bearing systemic risks</li> <li>Monitor relevant debt indicators and other performance criteria to ensure debt sustainability</li> </ul>
Active portfolio management	<ul style="list-style-type: none"> <li>Active monitoring of risks (interest rate, exchange rate, and counterparty risks)</li> <li>Performance measurement using benchmark or other yardsticks</li> <li>Continuous market analysis</li> <li>Constant innovation</li> </ul>		<ul style="list-style-type: none"> <li>Ensure effective risk management is encouraged</li> <li>Monitor systemic risk through prudent bank supervision</li> <li>Set standards for transparent and reliable corporate disclosure</li> </ul>

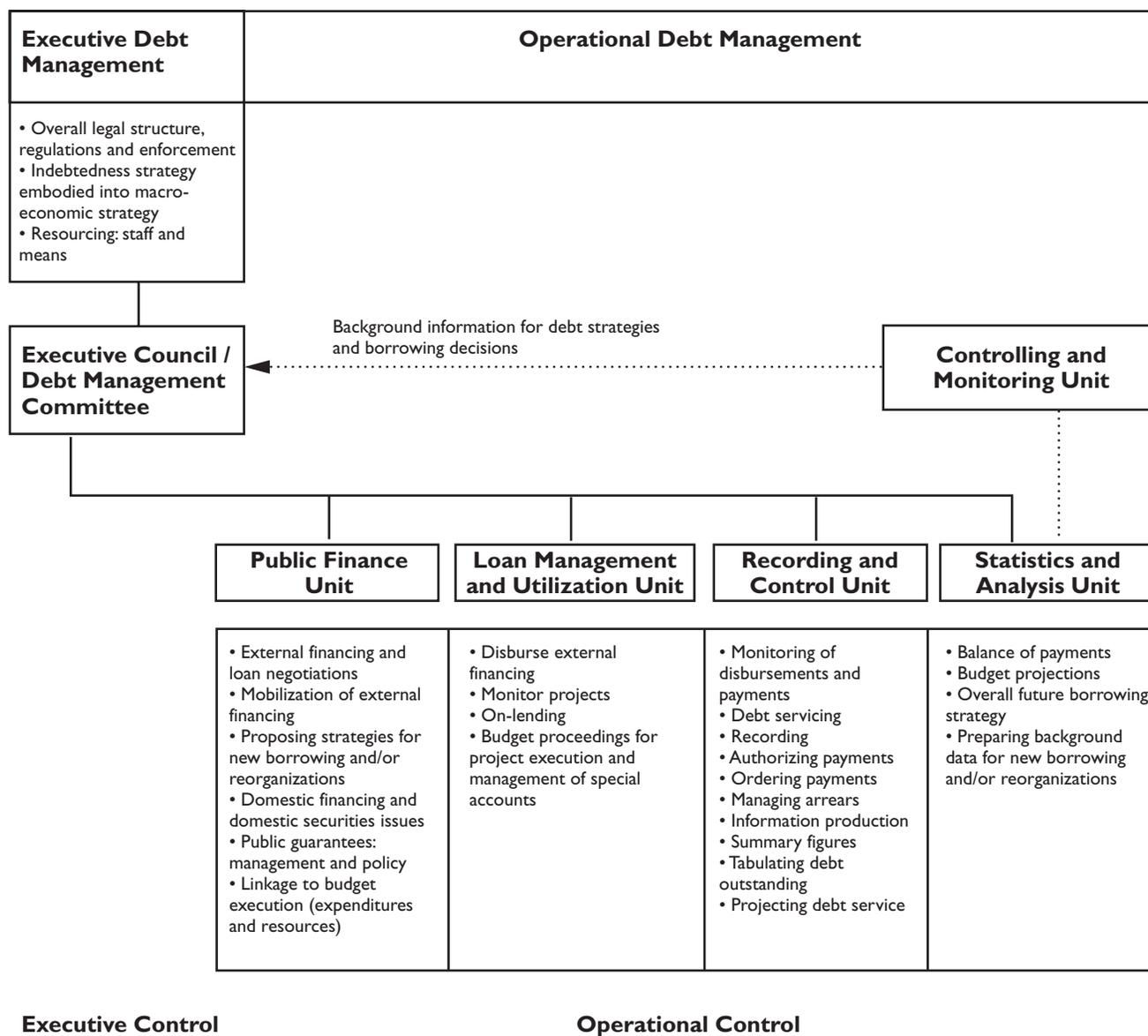
functions (known as the executive debt-management functions) are undertaken at a very senior level, i.e., Board of Ministers or a subset of it, and as such might be viewed as establishing the “rules of the game” by the highest levels of government. Hence, direction and organization are given to the whole debt-management system. Once this framework has been decided upon, it is the government debt office that undertakes the other operating functions, implementing and executing the set of agreed “rules of the game” mainly through the controlling/monitoring and the controlling/coordinating functions.

**11.21 Policy, regulatory, and resourcing.** These functions deal with the formulation of debt-management objectives and strategy including the setting up of debt sustainability levels. A strategy may, for instance, impose statutory limits or overall guidelines on how much borrowing can be done by the

public sector and/or by the economy as a whole, which in many cases is approved by the parliament. These functions also cover the institutional arrangements that govern the determination, raising, and disbursement of funds, and the related debt service, as well as the application of laws and regulations that govern debt management at the policy and operational levels. The resourcing function ensures that the recording, analytical, controlling, and operating functions pertaining to public debt management are performed by qualified staff and involves recruiting, hiring, motivating, training, and retaining staff.

**11.22 Recording, analytical, and operations.** The recording function deals with the recording framework for all relevant debt-management information and with those activities related to the raising of loans, the budgetary and reserves provision of debt-

Figure 11.1. Organizational Chart of a Government Debt Office



service payments, and the servicing of debt. The analytical, or statistical, function utilizes the information provided by the recording function. At the aggregate level, the analytical function involves macroeconomic analysis to explore the various options available, given economic and market conditions, and determining the future structure of the external debt. The operating function involves nego-

tiation, utilization of loan proceeds, and the servicing of debt.

**11.23 Controlling/monitoring and controlling/coordinating.** The monitoring function covers the entire range of activities involved in the maintenance of debt statistics and their analysis. This function helps ensure that policy objectives are realized and assists

in the determination of debt-management policies. The controlling/monitoring function must ensure, among other things, that the terms of new borrowings fall within the guidelines set by the senior level; that funds are being utilized on time and appropriately; and that repayments are made according to schedule. At the aggregate level, the controlling/coordinating function is essential in ensuring that operational debt management is in accordance with executive debt-management actions (that is, the policy and regulatory functions performed at the most senior level).

**11.24** *Active portfolio management.* This function covers the day-to-day active management of the debt portfolio. This function takes into account market developments, such as in interest rates and exchange rates, which affect the portfolio in terms of desired performance and risk. Formally, active portfolio management pertains to the operations function, but given its specificity it is best to consider this work separately.

**11.25** The location and organizational structure of a government debt office (typically referred to as a debt-management unit) will vary among countries. The differences between developing and developed countries are due to the differences in sources of financing. That is to say that the organizational structure is different if the country is mainly a borrower of International Development Association

(IDA) funds or if the country is issuing bonds in the international financial market.

**11.26** For most developing countries, the debt-management functions are not assumed by a single office but dispersed across several institutions. A schematic representation of these functions can be found in Figure 11.1. A common structure has a debt office in the ministry of finance, focusing on public domestic and external debt, with the central bank overseeing private debt, and often taking on the operational functions related to government debt as its financial agent. Ministries of planning and finance and the central bank each make economic forecasts that provide the framework for debt management. A high-level coordinating committee steered by the ministry of finance (or the prime minister's office or a ministry of economic coordination) takes charge of debt strategy and policy, which should be embodied in the overall macroeconomic targets. In some developed countries, however, an independent government debt office conducts debt operations based on objectives set by the government as part of asset-liability management operations. Ireland, New Zealand, Sweden, and the United Kingdom have set up such structures that delineate separate objectives for debt management and monetary management. No matter what the structure, each country should have a transparent framework for the efficient conduct of all debt office functions.

## 12. Banks and Other Sectors' External Debt Statistics

### Introduction

**12.1** In circumstances where controls on foreign borrowing are still in place, it is possible for the central bank to compile information on private sector borrowing from information provided by borrowers for regulatory purposes, such as when they seek approval for foreign borrowing. Also, commercial banks might well be required to report on foreign transactions of their private sector clients. However, as liberalization of financial transactions proceeds, and such information becomes less readily available, there is a need to develop methods of collecting data on private sector debt through other means. This chapter considers the collection of these data from banks and “other sectors” when financial transactions are liberalized. The measurement of external debt in the form of traded securities is covered in the next chapter.

**12.2** From the standpoint of compiling external debt data, information collected at the level of the individual debt instrument provides the statistical agency with the greatest flexibility in meeting user requirements. Provided that sufficient detail on the characteristics of the instrument is supplied, potentially varied combinations of characteristics of external debt could be produced as users request (the method by which the compiling agency stores the information supplied could limit the possibilities). Also, instrument-by-instrument detail supports detailed quality checks. However, some compilers may find that it is only realistic to ask respondents to supply aggregate data. If so, the design of the survey form is particularly important because it needs to endeavor to meet all foreseeable data needs—it is unlikely that the form can be changed very frequently, not least because respondents will develop systems to compile the required information—and incorporate quality-control features (for example, cross-checks on the form itself or with related data collections). If the survey form is too complex, there could be a negative

impact on quality as respondents may have difficulty supplying the required information.

**12.3** It is recognized that for compilers, compiling comprehensive data for the private sector presents a greater degree of difficulty than for the public sector. Problems can arise from the limitations inherent in the available information sources. For instance, data on arrears may not be readily available from balance sheet reports, nor data for a debt-service schedule. Also, it may be difficult to monitor certain sectors of the economy, such as the household sector. In all such instances, the importance and relevance of the data needs to be weighed against the likely costs of collection, and, where appropriate, alternative sources and methods used to produce data of an acceptable degree of accuracy and reliability (for example, data from creditor sources).

### Banks

#### Reporting of Debt

**12.4** An important source of information on external debt is the banking sector. Banks are closely regulated in nearly all countries—and so are usually identifiable to the statistical agency—and have to report balance sheet data to central banks or regulatory agencies both for supervisory and monetary policy purposes. These reports can be a major source of information on the outstanding external debt of banks. External debt includes deposits of nonresident banks with domestic banks, deposits of other nonresidents with domestic banks, and other external liabilities, such as bonds and notes, and other debt securities owned by nonresidents and issued by domestic banks. Domestic banks include resident branches of foreign-owned banks.

**12.5** It is essential that the reporting requirements that the central bank agrees with the commercial

banks take account of the need for data on external debt. When changes in bank reporting are being considered, a task group could be formed that includes relevant statistical experts on external debt and other external statistics. In particular, attention must be paid to how external liabilities (and assets) are defined, and the external debt, and balance of payments, concept of residence (and not nationality or currency) should be used to determine what is an external liability or asset.

**12.6** However, balance sheets typically do not contain sufficient detailed information on the maturity of loans and deposits; and additional information is required to calculate the debt service payment schedule for the banking sector.<sup>1</sup> This is best achieved by obtaining and using information on individual external debt instruments. When these data are not available to the compiling agency, and depending on the type of debt liabilities, the compiler can estimate projected interest costs using position data and appropriate representative interest rates, but some indication of a payment schedule is required for projecting principal payments.

### Offshore Banks

**12.7** Data on the external debt of “offshore banks” should be collected and included in the gross external debt position. Some compilers argue that banks that are treated as “offshore” under exchange control and other regulations should be excluded from the coverage of external debt statistics because the banks borrow from and lend to nonresidents. In other words, debt of such “offshore banks” does not relate to developments in the domestic economy and should be excluded. However, even if netting is legally binding in the jurisdiction of one country, legal actions by third parties may prevent the local banking institution from enforcing its right of offset. Thus, if the loans of offshore banks become unrecoverable, these banks still need to find the resources to meet their debt obligations. Nonetheless, as noted in Chapter 2, in some economies separate identification of the gross external debt (and external assets) of resident “offshore banks” and other “offshore entities” is necessary because of the

<sup>1</sup>Examples of the type of disaggregated information that could be collected from a balance sheet are set out in IMF (2000d), *Monetary and Financial Statistics Manual* (see, for instance, Box 7.1, p. 76).

potential size of their liabilities relative to the rest of the economy.

### Other Issues

**12.8** In addition to their on-balance-sheet liabilities, the compiler could consider collecting data on outstanding guarantees given by banks. Banks do guarantee debts of private nonfinancial sector borrowers, and while not external debt of the banks, but rather the debt of other sectors, there is analytical interest in data on guarantees. Although data on bank guarantees most likely will cover only part of the private sector's external debt, these data may be helpful in cross-checking data provided by other sectors.

**12.9** Central government and public enterprises sometimes borrow from resident banks instead of directly from foreign lenders. The loans may be denominated in foreign currency, and the ultimate borrower, not the commercial bank, assumes the exchange risk. There is potential for double counting if the government reports the foreign currency loan as an external liability along with the bank. If the bank borrows externally, it is the bank not the government that has the external debt.

**12.10** Also, other private sector entities may borrow foreign currency from resident banks, particularly if the nonbank private sector is not allowed to borrow directly abroad (so that the authorities have close control over capital flows). In these cases, the compiler has two sources of information: the private nonbank entity (perhaps from exchange control forms), and the reports of the bank. The preferred source is the bank because the bank has the external debt, and bank records are normally more comprehensive.

### Other Sectors

#### Enterprise Surveys

**12.11** When no comprehensive exchange controls exist, data on loans and other external debt of other sectors are best obtained through a periodic survey of those enterprises (including nonbank financial institutions) that are involved in external transactions.<sup>2</sup>

<sup>2</sup>IMF (1995), *Balance of Payments Compilation Guide*, provides practical advice on model survey forms for the compilation of balance of payments and IIP data.

The accumulation of transactions data from the balance of payments, together with valuation adjustments, is commonly used to estimate position data between position surveys. The appendix to this chapter provides the methodology for such calculations.

**12.12** To ensure good coverage of cross-border activity, it is necessary to develop and maintain a register of nonbank enterprises that have or could have significant cross-border assets and liabilities. Without a good register, serious discrepancies from reality could arise. Enterprises might be identified from customs forms—it seems likely that such entities will be involved in trade credit transactions—and/or from balance of payments reports, such as through a system that relies on bank reporting of individual transactions, and/or by the regulatory authorities, such as information held by foreign investment or monitoring boards. In Chapter 14, the practice of the Australian Bureau of Statistics is described, and this provides more ideas on how to develop a register, including the use of information from industry associations, newspaper articles, etc.

**12.13** In developing a register of enterprises to approach, it is vitally important that the work be coordinated with the agency that has the responsibility for the national accounts, as well as the balance of payments compiling agency. Not only will balance of payments and national accounts compilers be interested in information on external liabilities, the national accounts compiling agency may already have developed a centralized national register of reporting entities and be collecting some of the information required. Alternatively, registers may have been developed in different agencies for particular sectors—for example, manufacturing enterprises, banks, etc.—and a register for external debt purposes may be built up by conducting an “exploratory” survey of all these enterprises, in order to identify those that have external positions.

**12.14** In determining the reporting population, various approaches are possible:

- *Census*: Including in the survey all members of the population;
- *Partial coverage collection*: Including in the survey all enterprises above a certain threshold measured in terms of their dimensions (for example, nominal capital) or other variable (for example, significant cross-border activity);

- *Random sample*: Including in the survey enterprises that are preferably selected according to rigorous sampling procedures, with the results “grossed” up for the whole population; and
- *Stratified random sample*: A procedure that groups population components according to the size of selected activity so that enterprises within different strata have different probabilities of selection. Usually, this is a combination of the partial coverage and random sample options but is more sophisticated and might produce a high level of coverage while remaining relatively cost-effective.

**12.15** It is usually preferable to approach enterprises that engage in a number of activities at the group level because they may have a central organization that handles the external financing transactions of the group. Also, approaching the enterprise at this level reduces the workload for the compiler. However, if external financing transactions are handled by several centers in a group, and/or the group covers more than one type of institutional sector (for example, a bank and a nonbank enterprise), arrangements should be made to collect data from each center, in consultation with the enterprise.

**12.16** A survey of nonbank enterprises should cover loans from nonresident banks, securities issued abroad (both long- and short-term), trade credits, and other external liabilities. If the information on debt instruments is provided on an instrument-by-instrument basis, details collected could include name of lender, country and type of lender, currency, amount outstanding, start date of contract, due date of contract, scheduled payments of principal, interest payments, put options, and relationship between borrower and lender. Similar information could be required for securities, although the identity of the lender may be unknown to the borrower. Although this information is detailed, it should be readily available to the entity for its own accounting purposes and, in most instances, should be public knowledge. Also, if possible, it is preferable to collect liability and asset data together on the same survey form, not least because the balance-sheet approach introduces a consistency in its own right, while the development of external debt within an IIP statement, among other things, would focus attention on external assets as well as liabilities.

**12.17** When developing survey forms, writing very clear reporting instructions is an essential but not

easy task—different respondents must be clear about what types of transactions they should report. The overwhelming evidence from compilers is that report forms and instructions should be kept as simple as possible. Practical experience invariably shows that where compilers complicate the form and the instructions, perhaps to collect that extra bit of detail, the compiler is disappointed with the information received. Reporting instructions must be clear on concepts, on what is to be reported, and on who can be contacted at the statistical agency, together with telephone and fax numbers and e-mail addresses, in the event of the respondent having a question about the reporting requirements.

**12.18** The compiler is advised to undertake form testing—that is, finding out from a sample of respondents whether the instructions are clear and workable before they become operational. Also, seminars and workshops explaining the reporting requirements for respondents are of value to both respondents and the compiling agency, and are encouraged by the *Guide*. On an ongoing basis, the maintenance of an electronic register that keeps track of respondents who have called and when, who was the contact person, their phone number, etc., is information that helps ensure a well-run statistical operation. Through such a register, corporate memory at the statistical agency can be developed.

**12.19** Even so, private nonbank entities may be more reluctant than banks and the government to report to the compiling agency. How can they be “encouraged?” There are at least three important steps that can be taken.

- As mentioned above, there should be legal backing for the surveys, so that as a last resort the compiler has some means of redress if the respondent proves unwilling to report. However, this legal backing must make clear that any data supplied will be used only for statistical purposes, and this statement must be honored in letter and spirit by the compiling agency. Nonbank respondents may well be reluctant to supply data if they believe the data will be shared among other agencies.
- Other elements of government that have a policy interest in external assets and liabilities should be made aware of the reporting needs and encouraged to promote the need for good reporting whenever possible when dealing with private enterprises. Better data helps promote better-informed policy-making. In other words, the authorities should

build the idea of good reporting into their policy objectives in this field. Often, those with policy responsibilities have access to senior officials in private entities and so can deliver the message of good reporting at a more senior level than might be available to the statistical agency.

- The compiling agency along with other agencies responsible for statistics should encourage a “culture of reporting.” This is not easily achieved in a short time period and should not just cover external debt data, or the private nonbank sector. Steps to encourage a culture of reporting include meeting potential respondents and discussing issues of concern; developing report forms that as easily as possible fit in with management reporting systems and are not overly complex; and disseminating and promoting the final output in a transparent manner. If data are captured and compiled in an efficient manner and the output is seen to be important, private sector respondents are more likely to report.

**12.20** Even if data are supplied, how can they be confirmed to be reliable? First, if data are supplied in a balance-sheet form this adds a degree of consistency in its own right. Also, if a publicly quoted company supplies data, published accounts from the company are likely to be available against which data can be checked.<sup>3</sup> Second, wherever possible data should be cross-checked with other sources. For instance, transactions data can be compared with changes in position data if different sources are used. Net borrowing data from income and expenditure accounts, or profit and loss accounts of companies, can be compared with the buildup of net financial assets and liabilities because the two are interrelated. Income data could be compared with position data to see whether the implied rates of return on liabilities and assets are realistic. Data on nonbank liabilities to foreign banks could be cross-checked with the international banking statistics from the BIS, although conceptual differences between BIS and national data need to be taken into account.<sup>4</sup> Some economies may make periodic requests to creditors to verify the status of loans that they have extended to organizations in the country, but nonresident creditors may be

<sup>3</sup>Because accounting standards do differ in some respects from statistical standards, this approach may provide a broad rather than close check.

<sup>4</sup>See the case study for Chile in Chapter 14 and the BIS report *Comparison of Creditor and Debtor Data on Short-Term External Debt* (2002).

unwilling to provide information to foreign government agencies when private debtors are involved.

## Other Approaches

### Direct reporting companies

**12.21** A variation of the enterprise surveys mentioned above is the establishment of so-called *direct reporting companies* (DRCs). DRCs are intended to constitute a representative sample of companies involved in cross-border activity, and to report on a regular and frequent basis to the compiling agency on transactions and positions with nonresidents. This approach, derived from an exchange-control-type administrative system, could be appropriately developed in a partially liberalized environment. In some countries, DRCs are divided into “general” and “partial” direct reporting companies.

- *General direct reporting companies* (GDRCs) are companies or groups of companies, the volume of whose cross-border transactions exceeds a certain threshold in a given period. For GDRCs, with the exceptions of certain portfolio investment transactions (see below), all cross-border transactions are covered in the reports to the compiling agency, including flows via foreign accounts and netting. There may be no threshold for the items to be reported. The reports may give details of the currency, amount, economic nature, and geographical breakdown of the transactions. The reports of GDRCs may not include flows/positions concerning portfolio investment cash management and investment income when these transactions are conducted through resident commercial banks. Instead, these types of transactions/positions are reported by the domestic commercial banks involved in the particular transactions. However, if these transactions are carried out or held directly via foreign accounts, they remain under the responsibility of the GDRC in question to report, because the GDRC is the only domestic entity aware of these transactions/positions.
- *Partial direct reporting companies* (PDRCs) are companies that hold accounts abroad or participate in an international netting arrangement through which payments are made or received. These companies are subject to direct reporting requirements when the monthly total of incoming and outgoing payments through the accounts exceeds the agreed threshold. The reports of PDRCs are similar to those of the GDRCs, but they cover only flows/

positions via their foreign accounts and changes of position within these accounts. Other transactions/positions between PDRCs and nonresidents are reported by the resident banking sector.

### Registers of external loans

**12.22** Some external debt compilers use so-called *registers of external loans* to obtain data on loans received by the nonbank sector. These data, usually collected for exchange control purposes, allow monitoring of both loans from nonresidents and nonmarketable securities issued to nonresidents. If the exchange controls are abolished, the administrative accounting documents created for that purpose might be transformed into reporting documents for statistical purposes. The figures obtained from this source usually cover both loans between related (parent companies and affiliates) and nonrelated companies, and financing obtained through international bonds and notes, commercial paper, and other issuance programs.

### Monitoring Short-Term Debt and Trade Finance

**12.23** Monitoring short-term debt—that is, loans with an original maturity of one year or less—is of great importance because high levels of short-term debt can make an economy particularly vulnerable to shifts in market conditions and, in the case of trade credits, can have an important impact on real economy activity.<sup>5</sup> However, monitoring such liabilities is a complex process, not the least because there are many small transactions and many participants. In particular, if foreign trade is large relative to total production, there are likely to be many enterprises that receive foreign short-term credits.

**12.24** Short-term loans and trade finance could be covered by the kind of enterprise surveys, and other approaches, discussed above. While collecting data on a loan-by-loan basis has some advantages, information on private sector short-term debt is likely, for practical reasons, to be compiled only in aggregate. Because of the sheer number of transactions involved and their short maturity, information on

<sup>5</sup>As was seen in some Asian economies in 1997–98, a sudden restriction on trade credit finance can depress imports, impacting on the production process and the level of exports when these activities have a high import propensity.

short-term debt may not necessarily be easy to compile on a transaction-by-transaction basis for all categories of short-term debt.

**12.25** Also, policymakers may require more up-to-date detailed information so that the short-term financing position of the economy can be closely monitored. For banks, this might include daily or weekly reports covering interbank lines—the amount, the confirming bank, etc.—because these lines are the core of external funding and sensitive to changes in perceived credit worthiness. Also, key borrowers might be asked to prepare monthly position reports on trade finance covering amounts, currency, counterpart country, and sector.

**12.26** An alternative approach for those countries with balance of payments compilation systems that rely on banks' reporting of individual transactions is to estimate the stock of trade credit debt by accumulating the transactions to the existing position data, taking account of exchange rate fluctuations. However, the main drawback of this approach is that banks may not identify trade credit accurately, or its coverage may not be comprehensive. For instance, new extensions of trade credit for importers might be better identified by banks than repayments of that credit, leaving trade credit stocks artificially high.<sup>6</sup> Also, the recording of cross-border merchandise trade financed through direct credit between importers and their suppliers might be missed because it involves no payment transactions. Although comparing the level of imports recorded by customs with the import payment figures recorded through bank reports might get around this latter problem, there would be a need to ensure that the customs and the banks are taking a consistent approach to classifying and recording imports.

**12.27** In the gross external debt position, trade financed or intermediated—such as through the discounting of bills—by a bank is not classified trade credit but rather as a loan or short-term security. However, Chapter 7 provided a table for the presentation of all trade-related credit because of its importance for the real economy.

<sup>6</sup>To counter this problem, some countries have developed their systems such that repayment of trade credit is assumed after a certain period of time (for example, three months). Any such approach should be supported by periodic direct surveys of trade credit positions.

## Financial Derivatives

**12.28** In the external debt statement, positions in financial derivatives should be recorded on a gross basis and valued at market prices. However, at the time of the preparation of the *Guide*, few countries had a system for measuring financial derivatives position data. Furthermore, in some countries the statistical recording of positions in financial derivatives is hampered by the existing accounting rules for banks and enterprises that do not require financial derivatives positions to be recorded on-balance-sheet and valued at market prices.

**12.29** In some countries where information on stocks is available, it is based on regular reports from the largest players, particularly the banking sector. Indeed, available information indicates that derivatives markets are highly concentrated, and so a survey of the major banks and investment houses, which includes information on the counterparties to their derivatives positions, along with the major enterprises that borrow abroad, might cover a considerable amount of resident activity in financial derivative instruments. Given the complexities involved, when developing a financial derivatives survey, it is strongly recommended that it be coordinated with those responsible for other macroeconomic data series that also require information on financial derivatives. Also, it is important that data on market value of positions are collected, since the market value determines the asset or liability position of the financial derivatives contract. Chapter 7 includes tables that present the nominal or notional positions of foreign currency derivatives, and, if significant, interest rate derivatives. These data could also be collected.

**12.30** By way of example, in a survey of financial derivatives positions the types of analytical detail that compilers might consider collecting include:

- *Product category*: Forwards (including futures and swaps) and options;
- *Risk category*: Exchange rate, interest rate, and other risk (perhaps, if significant, disaggregated into commodity, credit, and “other”); and
- *Counterparty information*: General government, monetary authorities, banks, other financial institutions, other residents, and nonresidents.

**12.31** While the *Guide* does not explicitly recommend the collection of data on the notional or nomi-

nal value for all risk types of financial derivatives, such information can be of analytical value. For instance, the nominal or notional amount provides some indication of the size of the risk transfers underlying financial derivatives instruments, while, as a quality check, the ratio of market to nominal value that is reported could be compared with the “normal” ratio derived from the BIS’s semiannual statistics on the open positions in the global over-the-counter (OTC) derivatives market.

**12.32** The BIS semiannual derivatives data were introduced in June 1998.<sup>7</sup> They cover the notional amounts and gross market values outstanding of the worldwide consolidated OTC derivatives exposure of major banks and dealers in the G-10 countries, with four main categories of market risk reported: foreign exchange, interest rate, equity, and commodities. Because they are not residence-based, the direct usefulness of the BIS data in the compilation of residence-based statistics is limited. Nonetheless, the BIS data do provide a good indication of the relative size and importance of different types of derivatives instruments, and, as mentioned above, of the relationship between market and notional amounts.

### Direct Investment

**12.33** The external debt statement includes information on liabilities of resident direct investment enterprises to foreign direct investors, and of resident direct investors to their foreign direct investment enterprises. Measuring direct investment activity is an integral element of balance of payments and IIP statistics. Many economies take a particularly close interest in direct investment activities because of the benefits this activity is perceived to bring to the economy. Thus, it is recommended that in compiling external debt, use be made of the information on direct investment in the balance of payments and IIP.<sup>8</sup> Care must be taken to avoid double counting of securities, or other debt, in both direct investment and their instrument category. Direct investment takes precedence; for example, a bond issued by a

resident direct investment enterprise and owned by its foreign direct investor is classified under direct investment rather than under debt securities (that is, equivalent to portfolio investment in the balance of payments).

### Household Sector

**12.34** Obtaining data on the external debt of the household sector is difficult. In many economies, the household sector will focus its borrowing on resident financial institutions, not least because of familiarity. However, with modern forms of communication and their ability to advertise products across borders, borrowing from abroad might become more prevalent. One method of collecting information might be to include foreign borrowing questions in a household survey of expenditures, income, financial assets, and liabilities.

**12.35** For countries that rely on a bank reporting system, specific procedures are sometimes set up to capture data on cross-border asset and liabilities held by residents with nonresident financial institutions, since these positions are not covered by the resident banks’ reporting. Under these procedures, all households are obliged to report such positions to the central bank on a regular basis (monthly, quarterly, or annually). Also, transactions settled through these accounts abroad are to be reported by households, with the frequency and detail of individual reporting dependent on the scale of the activity undertaken.

### Appendix: Estimating Position Data with Transactions Information

**12.36** Changes in positions between end-periods are accounted for by up to four factors: transactions; changes in the price of debt instruments; changes in exchange rates; and other adjustments, such as reclassifications. For all instruments, there can be transactions and other adjustments, but not all instruments are affected by changes in prices or exchange rates. This appendix considers the estimation of position data using transactions data, starting with instruments that are relatively straightforward, and moving on to those that raise more complex issues. Because estimating positions for instruments whose prices change raises the most complex problems, a distinction is made between those instruments that are not traded and those that are.

<sup>7</sup>A regular press release on these data is available on the Internet, at the BIS website, <http://www.bis.org/statistics/index.htm>.

<sup>8</sup>In 2001, the IMF and OECD updated a survey of data availability, data sources, compilation practices, and methodology used to compile FDI data. The metadata for 56 individual countries and cross-country comparison tables are available on the IMF’s website at <http://www.imf.org/external/np/sta/di/mdb97.htm>.

### Nontraded Debt Instruments

**12.37** For nontraded instruments, a distinction needs to be made between those whose value is linked to the unit of account and those whose value is not.

#### *Debt instruments with value linked to the unit of account*

**12.38** For a debt instrument issued in the unit of account, the estimation of position data with transactions data, in principle, is simply a case of adding transactions in the period to the previous position, and taking account of any other adjustments. However, even for such instruments, mismeasurement of position data is possible if the coverage of transactions data is not complete—for instance, due to incomplete population coverage—or if there is misreporting of transactions, including an inability of respondents to report transactions when they occur. Indeed, the compilation of position data through the accumulation of transactions data could lead to a significant mismeasurement over time, in such circumstances. Thus, even for nontraded instruments whose value is linked to the unit of account, there is a need to undertake position surveys from time to time, both to help ensure the quality of position data and also as a check on the reported transactions data.

#### *Debt instruments with value linked to a foreign currency*

**12.39** For instruments whose value is linked to foreign currencies, not only is there a need to take account of the same factors as mentioned above, but also of the currency composition of transactions and positions.

**12.40** It is recommended that if positions are to be calculated for instruments linked to a foreign currency, data best be compiled on a currency-by-currency basis. In other words, in the original currency, transactions in the period are added to positions at the end of the previous period, and after taking account of any other adjustments in the period, the end-period position is converted into the unit of account using the end-period exchange rate.<sup>9</sup>

<sup>9</sup>For nontraded instruments, the amount of the change between end-period positions in domestic currency terms attributable to exchange rate variation is equal to the difference between the

The positions in all foreign currencies, plus that in the domestic currency, are aggregated into a total position.

**12.41** Essential to such calculations is the availability, at some point in the past, of data on the currency composition of position data. For instance, if the currency composition of position data is available on an annual frequency at end-year, then in the absence of information on the currency composition of transactions data, quarterly position data could be estimated on the assumption that the currency composition of transactions is the same as in the observed end-year position data. Before making such an assumption, it would be necessary to check the observed changes in currency composition over a number of years—the less variable over time the proportions for each currency, the more robust the assumption might be. Once further end-year data are available, revisions to back data to reflect the new information are almost certain to be required.

**12.42** In the absence of data on the currency composition of position data for the whole economy, one sector (for example, banks) might provide such information. A comparison between the currency composition of bank liabilities and those for other sectors could be made for periods when both are available. Provided that there is some similarity, the data from banks could be drawn upon to estimate the currency proportions for the rest of the economy, until new data for all sectors become available.

**12.43** An alternative approach is to ignore the currency composition and, in effect, assume that all foreign currency liabilities are in the same currency. This “currency” could be the trade-weighted exchange rate or the known dominant currency in the country’s financial flows, such as the U.S. dollar. Under this approach, positions could be estimated by revaluing both the previous end-period position, the transactions during the period, and any other adjustment:<sup>10</sup>

opening and closing positions, less transactions over the period in domestic terms less any other adjustments in domestic currency terms. For the calculation to be accurate, the transactions and other adjustments need to be translated into domestic currency at the exchange rate at the time they occurred.

<sup>10</sup>The adjustment could increase or decrease positions.

$$\hat{K}_t = K_{t-1} \left( \frac{x_t}{x_{t-1}} \right) + F_t \left( \frac{x_t}{\bar{x}_t} \right) + A_t \left( \frac{x_t}{x_a} \right), \quad (12.1)$$

where

$\hat{K}_t$  = estimated end-period position

$K_{t-1}$  = previous end-period position

$F_t$  = transactions in the period in the unit of account

$x_t$  = end-period exchange rate

$x_{t-1}$  = end-previous period exchange rate

$\bar{x}_t$  = average period exchange rate

$A_t$  = adjustment in the period

$x_a$  = exchange rate at the time the adjustment occurred.

In the above calculation, the exchange rate should be entered in terms of the number of units of the unit of account received for one unit of the foreign currency. The example below illustrates the principles involved.

**12.44** Assume that country A's gross external debt position was 1,000 in domestic currency terms at  $t-1$ , all of which was owed in U.S. dollars, and that there are transactions of 150 in domestic currency terms during the period. There were no other adjustments. The exchange rate was 10 of the domestic currency to 1 U.S. dollar at  $t-1$ , and 14 to 1 U.S. dollar at  $t$ , with an average rate during the period of 12 to 1 U.S. dollar:

$$\begin{aligned} \left( 1,000 \times \frac{14}{10} = 1,400 \right) + \left( 150 \times \frac{14}{12} = 175 \right) \\ = 1,575 \text{ (estimated end-period total).} \end{aligned}$$

**12.45** Whichever approach is used to estimate end-period positions, in the absence of full currency information, there will be estimation weaknesses. Where end-period currency compositions are assumed for subsequent periods, clearly the actual currency composition of transactions could be different, and this is also true when using one sector's data. Not making any assumption about currency composition is essentially akin to assuming that all other currencies move in an identical way in relation to the unit of account. In both cases, the more volatile the exchange rate, the greater the likelihood of mismeasurement. Even more so than for nontraded instruments linked to the domestic currency, frequent observations of position data for instruments whose value is linked to a foreign currency are recommended, otherwise significant mismeasurement could arise over time.

## Traded Debt Instruments

**12.46** Calculating positions with transactions data is particularly difficult for traded debt instruments, whose prices change from period to period. In addition to taking account of other adjustments, and, if need be, movements in exchange rates, as above, there is a need to take account of movements in market prices. One particular difficulty is that there are many traded instruments all with their own price. Also, unlike nontraded instruments, the debtor is unlikely to know the extent to which traded instruments are owned by nonresidents if nonresidents purchase instruments in domestic markets, or the debtor borrows in foreign markets. So, as noted in Chapter 13, the compiler cannot rely on the debtor for detailed information on traded instruments owned by nonresidents.

**12.47** To make exact calculations, knowledge is required on the whole sequence of intraperiod prices, exchange rates, and transactions: such information may not be readily available to individual respondents, let alone national compilers. So, some simplifying assumptions or models are therefore needed to produce estimates.

**12.48** The data model most widely employed in the field of external statistics is that recommended in various methodological publications prepared by the IMF.<sup>11</sup> For this model, in addition to information on exchange rates, some estimate of market prices of the instruments is needed. As with exchange rates, the more detailed information available to the compiler, the better. For market prices, the simplest approach might be to base estimates on a representative government bond price(s) for domestic instruments, if available, and/or benchmark prices in other markets where domestic residents have issued instruments.

**12.49** With the required information, the data model can be used for a variety of purposes: calculating transactions on the basis of position data; calculating positions with transactions data; or "validating" both sets of data. The first two variants are particularly useful when only one of these variables is measured directly; the third when both variables are measured,

<sup>11</sup>See the IMF (1995), *Balance of Payments Compilation Guide*, paragraphs 732–43 and 778–83, and the IMF (1996), *Coordinated Portfolio Investment Survey Guide*, Appendix VIII, pp. 155–58. The BIS and the OECD contributed to the latter publication.

using either the same source or different sources or samples (in which case it is necessary to check on whether reported data on positions and transactions are mutually consistent). The model was originally employed to derive transactions data from positions data:

$$\hat{F}_t = K_t \left( \frac{\bar{x}_t \bar{p}_t}{x_t p_t} \right) - K_{t-1} \left( \frac{\bar{x}_t \bar{p}_t}{x_{t-1} p_{t-1}} \right), \quad (12.2)$$

where

$\hat{F}_t$  = estimate of transactions

$p_t$  = end-period prices

$\bar{p}_t$  = average period prices.

**12.50** However, it can also be used to derive positions data with transactions data. Indeed, equation (12.3) is similar to equation (12.1), once the adjustment factor is introduced, except that equation (12.3) also includes price effects, based on period averages. If the value of the instrument is linked to the unit of account, then the exchange rate factors are redundant.

$$\hat{K}_t = K_{t-1} \left( \frac{x_t p_t}{x_{t-1} p_{t-1}} \right) + F_t \left( \frac{x_t p_t}{\bar{x}_t \bar{p}_t} \right) + A_t \left( \frac{x_t p_t}{x_a p_a} \right), \quad (12.3)$$

where

$p_a$  = price at which adjustment occurred.

**12.51** The example below illustrates the principles involved. Again assume that country A's gross external debt position was 1,000 in domestic currency terms at  $t-1$ , all of which was owed in U.S. dollars, and there are transactions of 150 in domestic currency terms during the period. There were no other adjustments. The exchange rate was 10 of the domestic currency to 1 U.S. dollar at  $t-1$ , and 14 to 1 U.S. dollar at  $t$ , with an average rate during the period of 12 to 1 U.S. dollar. The securities owed to nonresidents were valued at 1.1 at  $t-1$ , at 1.045 at  $t$ , and at 1.066 during the period:

$$\begin{aligned} & \left[ 1,000 \times \left( \frac{14}{10} \times \frac{1.045}{1.1} \right) = 1,330 \right] \\ & + \left[ 150 \times \left( \frac{14}{12} \times \frac{1.045}{1.066} \right) = 171.5 \right] \\ & = 1,501.5 \text{ (estimated end-period total).} \end{aligned}$$

**12.52** The accuracy of the model depends on the volatility of financial prices and transactions in the period covered; in particular, the accuracy of estimates is inversely related to the combined amount of intraperiod dispersion in prices and transactions.

Estimated values would approach the "true" values when transactions are spread more uniformly and/or prices (including those of currencies) are less dispersed around their mean. Such conditions are more likely to prevail when the reference period chosen for compiling statistics is short (a month, or a quarter, rather than a year).

**12.53** Also, accuracy improves when flows are small compared with the initial stock, in which case intraperiod valuation effects would be of secondary importance. As a consequence, lower-frequency statistics compiled using the model could still be reasonably accurate when transactions are very small, even in periods of highly dispersed prices and exchange rates.

**12.54** In addition, research at the IMF (Committeri, 2000) has shown that the availability of more detailed financial information, allowing disaggregated estimates based on homogeneous groupings of instruments and currencies, results in estimates that are closer to the actual values of the relevant variables, irrespective of the intraperiod dispersion of prices and exchange rates. Creating homogeneous groupings might be achieved by collecting data on an instrument-by-instrument basis or on an aggregate basis, where information is collected by currency, maturity, and by type of instrument (such as whether the instrument has a fixed or variable rate of interest).

**12.55** Clearly, the more periods over which estimates are carried forward, the greater the possibility that the estimates will diverge from "reality." So, frequent observations of position data for instruments whose price can change are recommended.

**12.56** The data model set out in equation (12.3) above also offers manageable formulas for estimating the reconciliation adjustment (equation (12.4)), and its price and exchange rate components:<sup>12</sup>

<sup>12</sup>Adding equations (12.4a) and (12.4b) would not necessarily give equation (12.4), even if there were no "other adjustments." The difference represents the compound effect in equation (12.4) of changes in  $p$  and  $x$ , which cannot be further divided into "price" and "exchange rate" elements. The difference will be zero only when either  $x$  or  $p$  is constant. See Committeri (2000), pp. 6 and 8. Assuming no "other adjustments," one approach could be to estimate the exchange rate component first, and calculate the price component by residual; that is, subtract equation (12.4b) from equation (12.4).

$$ADJ_t = K_{t-1} \left( \frac{x_t}{x_{t-1}} \frac{p_t}{p_{t-1}} - 1 \right) + F_t \left( \frac{x_t}{\bar{x}_t} \frac{p_t}{\bar{p}_t} - 1 \right) + A_t \left( \frac{x_t}{x_a} \frac{p_t}{p_a} - 1 \right) \quad (12.4)$$

$$ADJ_t^{price} = K_{t-1} \left( \frac{p_t}{p_{t-1}} - 1 \right) + F_t \left( \frac{p_t}{\bar{p}_t} - 1 \right) + A_t \left( \frac{p_t}{p_a} - 1 \right) \quad (12.4a)$$

$$ADJ_t^{xrate} = K_{t-1} \left( \frac{x_t}{x_{t-1}} - 1 \right) + F_t \left( \frac{x_t}{\bar{x}_t} - 1 \right) + A_t \left( \frac{x_t}{x_a} - 1 \right), \quad (12.4b)$$

where

$ADJ_t$  = total reconciliation adjustment between positions and transactions

$ADJ_t^{price}$  = the price component of the total reconciliation adjustment

$ADJ_t^{xrate}$  = the exchange rate component of the total reconciliation adjustment.

# 13. Traded Securities

## Introduction

**13.1** External debt in the form of traded securities corresponds to debt securities in the inward portfolio investment component of the balance of payments and IIP. In recent decades, the relaxation of restrictions on the foreign investment activities of banks and other institutional investors, combined with continued financial innovation, has resulted in a surge of cross-border investment in bonds (and equities). This has increased the interest of policymakers in data on this activity.

**13.2** However, ensuring comprehensive coverage of traded securities is among the most difficult in the field of balance of payments and external debt statistics. In particular, the resident issuer is, in many cases, not in a position to identify the beneficial owner of their securities, and so may be unaware of whether the creditor is a resident or nonresident. Thus, almost inevitably, to compile position data, other than by accumulating flows on a previous position, the compiler needs to obtain information on the stock of traded securities of residents, and the owners of those securities, from a variety of sources. While it is relatively straightforward, but not a simple task, to obtain data on nontraded debt liabilities, for the following reasons, it is more difficult to identify the owner of a traded security.

- Liberalization has facilitated the development of new channels through which investment can flow. In other words, compilers can no longer rely solely on traditional domestic data sources, such as banks or security dealers, because investors increasingly use foreign intermediaries, and security issuers may access foreign markets directly.
- Unlike banks, which have a tradition of reporting to the central banks, as noted in the previous chapter, nonbank economic agents may be reluctant to report to the authorities on their ownership of traded securities, because, among others, of concern that data sent to the statistical agency may be

passed on to other agencies. This, once again, highlights the need for the promotion of statistical integrity within the country.<sup>1</sup> Noncompliance by respondents leads to gaps in coverage at a time when activity is rising.

- The participation of various financial intermediaries in international transactions and the practice of registering of investment under nominee companies and in trusts can obscure the beneficial owner of the security.
- International markets in certain “new” instruments have grown quickly in the past decade, causing difficulty in determining the “true” owner of the security. An example is the use of securities in reverse security transactions.
- Rarely, if at all, is it possible for a government to have legal powers to require a nonresident investor to report on their ownership of securities issued by domestic residents.

Ways in which these difficulties might be overcome are examined in this chapter.<sup>2</sup>

## General Observations

**13.3** In looking at ways to capture activity in securities for external debt purposes, countries should take into account any existing system they already have in place for the collection of data on portfolio invest-

<sup>1</sup>Integrity of disseminated data is one of the four dimensions of the IMF’s Special Data Dissemination Standard (SDDS) and General Data Dissemination System (GDDS). Among the type of actions that the SDDS and GDDS outline to promote integrity is the dissemination of the terms and conditions under which official statistics are produced, including those relating to the confidentiality of individually identifiable information.

<sup>2</sup>Although a practical guide for the measurement of assets, a helpful source of information on compiling position data for traded securities is IMF (1996), *Coordinated Portfolio Investment Survey Guide*, and its second edition (IMF, 2002) is available on the Internet at the IMF’s website, <http://www.imf.org/np/sta/picpisd.htm>.

ment and, more generally, balance of payments data, and also arguably, national accounts data. Respondents will know the existing system, and a considerable amount of human capital will have been invested in it at the compiling agency. Those concerned with external debt statistics should draw on this knowledge and expertise, not least because a detailed system of collecting data on inward and outward security investment can be resource intensive.

**13.4** Also, there is a close linkage between cross-border securities activity and other data series such as direct investment. More important, inward, and outward, portfolio investment is directly affected by domestic activity. Whereas direct investment generally involves the establishment of a longer-term relationship between parent companies and their foreign affiliates, securities investment involves securities—both domestic and foreign—that potentially can be traded between residents and nonresidents. Depending on regulations and institutional arrangements, ownership of domestic and foreign securities can change quickly. Indeed, as exchange controls are lifted, inward or outward capital flows can arise from security transactions of both residents and nonresidents. So, while the focus in the *Guide* is on foreign investment in securities issued by residents, when considering how to measure this activity due regard should be given to the measurement of residents' investment in securities—issued by both residents and nonresidents.

**13.5** This close relationship between data on traded securities in external debt, the balance of payments, and the national accounts means that it is important for agencies to cooperate. Otherwise potentially useful information may not be utilized, while at worst, respondents could end up reporting essentially the same information to two different statistical agencies. Cooperation need not only involve statistical agencies. In other government agencies there will be potential users of the data collected. For instance, information on nonresident ownership of government securities is likely to be of interest to finance ministries in helping to formulate government debt policy. Policy ministries can help the compiler in devising report forms, encouraging responses, and in evaluating the (aggregate) data.

**13.6** Finally, any development of the data system to capture investment in domestic securities by nonresidents will inevitably lead to questions about the

computer system on which data are to be stored and manipulated. Computer systems are obviously tools that help facilitate a more efficient statistical operation, but before a computer system is installed, it is necessary to consider the form of the data capture and manipulation; the data output required both in final form and from interrogation of the system; as well as any need to be compatible with data stored in other systems.

## Key Considerations

**13.7** An important starting point in deciding how to measure positions (and flows) in traded securities is ascertaining how and through which channels security investment flows into and out of the country. This involves talking to market participants and generally gaining an understanding of the domestic security markets. The issues to explore are:

- How do nonresidents invest in domestic securities?
- Through which institutions do they invest?
- Where do nonresidents arrange for the custody of their domestic securities? How are records held?
- Where are trades settled?
- Are security codes used in monitoring security positions?
- Do residents issue securities directly abroad? Do residents invest in these securities?

**13.8** The importance of preliminary research cannot be overstated because, once completed, the compiler can decide at which point or points in the “chain” of activity it is most appropriate to collect information. There is no one obvious answer for all compilers. For legal, institutional, and historical reasons, different countries have different market structures and practices, and so what suits one country may not suit another. Nonetheless, the pros and cons of collecting information from different types of market participants can be indicated, and these are set out in Table 13.1. The relevant importance of the various advantages and disadvantages will depend on individual economy circumstances. For different instruments and markets, different collection methods may be appropriate.

**13.9** Before discussing the advantages and disadvantages of approaching different types of respondents, the relationship between the collection of transactions and position data needs to be considered. There are various ways transactions and position data can inter-

**Table 13.1. Inward Security Investment: Potential Respondents—Advantages and Disadvantages for Positions and Transactions Data**

Potential Respondent	Advantages	Disadvantages
<b>Issuer of security</b>	Will know about securities issued.	Unlikely to know beneficial owner of the security either at issue or during secondary market trading.
<b>Financial intermediary</b>		
<i>Banks</i> (receipts/payments)	Transactions in domestic currency require settlement through resident banks. Transactions recorded could be cumulated on a previous position and, with appropriate valuation adjustments, provide new position data.	Nature of transaction may be difficult to establish. May have a problem in identifying direct investment transactions. Although a method for compiling position data in the short term, a more direct measure of the stock position might be required in the medium term, depending on the complexity of the reporting system. Also, only covers investment in securities issued in the domestic market.
<i>Issuing agency</i> (security house/bank)	Will know about securities issued.	May not know beneficial owners at issue and, unless a dealer, will not know about secondary trading.
<i>Dealer</i> (security house/bank)	Will have information on sales and purchases of securities. As with banks, transactions data could be used to compile position data.	May not cover all nonresident purchases of resident securities. May have a problem with nominees and identifying direct investment transactions.
<i>Fund manager</i>	Will have information on beneficial owners.	Unlikely to cover all nonresident purchases and holdings of resident securities.
<b>Organized exchange</b>	Will have a record of transactions on the exchange and perhaps positions. Data on positions might also be available via member firms.	May not cover all nonresident purchases and holdings of resident securities. May have a problem with nominee accounts.
<b>Settlement agency</b>	Will have a record of transactions.	May not cover all nonresident purchases and holdings of resident securities. May have a problem with nominee accounts and identifying direct investment transactions/positions. Records may not be kept in a form appropriate for external debt/balance of payments purposes.
<b>Registrar</b>	Will know who owns which securities.	Use of bearer securities undermines the use of a securities register. May have a problem with nominee accounts. May not cover transactions particularly well.
<b>Custodian</b>	Information on ownership available. Fewer in number than investors. Should know information on the outstanding value of holdings.	Coverage of nonresident purchases and holdings of resident securities is uncertain. May have a problem in identifying nonresidents, although tax status may help, and direct investment transactions. May not know exact details of transactions/may have difficulty extracting data in line with balance of payments methodology. Double counting a potential problem if subcustodians used.

act: (1) transactions data can be compiled separately from position data, and cross-checks introduced to validate both sets of data;<sup>3</sup> or (2) transactions data can be added to a previous position and, with appropriate reevaluations and any other adjustments, a new estimated position calculated (although an independent benchmark position survey at periodic intervals is

essential to check and improve the quality of the estimated position data)—see the appendix to Chapter 12; or (3) position data can be compiled on a security-by-security basis, supported by a database with information on individual securities issued by domestic residents (Box 13.1), using individual transactions data to update the individual holdings of securities (although even then periodic verification of the derived position data is recommended using alternative or additional inquiries). Whichever method is used, decisions on whom to approach and what to request in terms of position data are at least influ-

<sup>3</sup>See IMF (1996), *Coordinated Portfolio Investment Survey Guide*, Appendix VIII, for an explanation of how to reconcile position and transactions data, and to estimate income from position data.

### Box 13.1. Security Databases

In measuring positions in traded securities, information may be collected from respondents at the level of the individual instrument. Such an approach potentially provides great flexibility in meeting requirements for external debt statistics. However, to utilize fully the potential of such information, the compiler is advised to develop or acquire a database that contains detailed information on individual securities—price, country of issuer, industrial sector of issuer, etc.—and that uniquely identifies securities through a security identification code.<sup>1</sup> Through such a database, individual securities that are reported with an identification code can be located in the database, and the associated information can be drawn upon to compile information not only on outstanding positions but, depending on the scope of the associated information contained, statistics on the debt-service payments schedule, the currency composition of external debt, etc. Also, such an approach can enhance data quality by allowing the compiler to check the accuracy of submitted data and to resolve conflicting reports.

#### Sources of Information

Information on individual securities can be obtained from commercial sources, international organizations, and security numbering agencies.

By far the most comprehensive and complete databases are those available from commercial sources, usually at a commercial price. The best of these commercial sources supply high-quality, timely, comprehensive data to the international financial community to support investment activity. At the time of writing, some of the leading commercial vendors, in alphabetic order, are Bloomberg, Euromoney Bondware, Interactive Data, International Financing Review, International Securities Market Association, Reuters, and Telekurs.<sup>2</sup>

<sup>1</sup>More detailed information on securities database is available in the IMF (2002), *Coordinated Portfolio Investment Survey Guide*, second edition, available at <http://www.imf.org/np/ista/pilcpisgd.htm>.

<sup>2</sup>These names are provided for information purposes only and imply no endorsement of any kind; any compiler who approaches any commercial database vendor will need to make his or her own judgments about whether the product being offered meets the compiler's needs.

The Bank for International Settlements (BIS) maintains a database of international debt securities that is available to member central banks and perhaps other governmental organizations, as described in Chapter 17.

The Association of National Numbering Agencies has a database of individual securities that is commercially available. By linking the databases of national numbering agencies (NNAs)—the entities that assign the international security identification number (ISIN) in their own jurisdiction—this database provides key descriptive information on individual securities. Coverage of individual securities differs in completeness among NNAs, and information on market prices is not included. To understand more about the information available on this database, it is recommended that the compiler approach the NNA that allocates ISIN codes to securities issued within the domestic economy.

#### Role of the Security Identification Code

As noted above, in a compilation approach that uses a database of individual securities, the security identification code is of central importance—the respondent needs to provide a code so that the database can identify the security. However, different respondents could submit different security identifiers for the same security because any widely traded security could be allocated a domestic as well as an international security identifier. For instance, in the United States, a domestic security code (known as CUSIP) will be allocated to a domestic security. As a result, private investors have adopted a variety of different security identification systems as their primary identifier. National compilers should discuss the use of security identifiers with potential survey respondents. If national compilers can rely on survey respondents to use primarily one coding system—for instance, the ISIN—this enhances the efficiency of the compilation procedure. If not, then the agency is advised to acquire a database(s) that contains all the various identifier codes that a given security has been assigned by the different coding systems. These cross-reference databases may well be available from the same commercial firms mentioned above.

enced by the approach taken to collecting transactions data. So, in the discussion below, both transactions and positions data are discussed.

## Nonresident Investment in Domestically Issued Securities: Potential Respondents

**13.10** An obvious approach for compilers is to collect information on nonresident investment in securities issued domestically by residents from domestic

financial intermediaries. This approach assumes that nonresidents will involve these intermediaries when undertaking transactions in the domestic market. For instance, for transactions and positions in government securities, the government might consider making such a reporting requirement a condition of any licensing approval that the domestic financial entity may need in order to have settlement accounts in domestic government securities.

**13.11** Typically, banks are approached for data on external transactions and positions because of their

role in the payments system; if domestic currency is used to settle transactions, a resident bank is likely to be involved. However, money flows through banks for a variety of reasons, and banks may have difficulty in establishing the specific nature of a transaction as a securities transaction. Also, it is important that transactions involving nonresidents are captured not only when money comes into the country but also whenever nonresidents transact in domestic currency, such as when a nonresident draws down a domestic bank account to purchase a resident security. This is the key issue: can banks identify and report in a comprehensive manner investment by nonresidents in domestic securities? The possible use of data from banks in their role as custodians is examined ahead.

**13.12** Another method used is to gather data on securities from investment dealers, including banks, that conduct portfolio investment business on behalf of nonresidents. In other words, those who arrange and execute the deals. Dealers usually keep records of client transactions and may be better able to identify portfolio transactions than banks through their payments system activity. Invariably, the number of financial intermediaries are likely to be fewer in number than investors, and, legal circumstances permitting, should be approachable. This method of approach depends, of course, on nonresidents using domestic intermediaries. Also, these institutions will need to be able to identify residents and nonresidents and keep records in a manner that allows their use in external debt, as well as balance of payments and IIP compilation.

**13.13** Canada has adopted a system of capturing foreign investment in securities using dealer reports, and this method is set out in Chapter 14. The dealers report individual transactions involving nonresidents and include the value of the deal and the unique code for the security (developed for settlement purposes).<sup>4</sup> Information kept on a database of individual securities is used to confirm the residence of the issuer of the security and provide additional information. Canada's detailed and complex

<sup>4</sup>While national numbering agencies (NNAs) frequently issue their own code for securities issued in their jurisdiction, they also allocate a unique international security identification number (ISIN) code for each security. More information on ISIN codes is available in IMF (2002), Appendix VII, pp. 151–53.

statistical system also generates income data on an accrual basis.

**13.14** Some countries carry out special surveys that are addressed to resident fund (investment) managers, and request information on own account and client account investments in resident and nonresident securities by resident and nonresident investors, thus providing the necessary data on residents' debt liabilities to nonresidents. Data on the country and institutional sectoral distribution of ownership may also be requested. The information can provide good coverage of the household sector's portfolio assets, provided that they use resident fund managers. However, such a survey will not provide comprehensive coverage of nonresident ownership of resident securities unless nonresidents use domestic fund managers extensively.

**13.15** Another method is to capture nonresident investment in domestic securities at the point of the trade or settlement—for instance, using information on transactions from the stock market. At the least, the stock exchange usually has to keep a record of individual transactions, and at best may act in a settlement capacity and see the cash change hands. It may be possible for this information to be supplied to the compiling agency. Sometimes there may be a separate but similar market mechanism for bond trades. Through these markets, nonresident investment transactions and holdings may be obtained. For instance, the exchange might have or can obtain the authority to request that information be reported to it on who owns what securities. This might be undertaken not only for statistical but also for regulatory and policy purposes.

**13.16** However, there may be reluctance for the stock exchange or settlement agency to release the information required by the compiling agency, and the prevalence of nominee accounts may lead to misidentification of the true investor (a common problem when “intermediaries” report). Other issues that could arise are whether the records kept can be readily utilized for external debt and balance of payments statistics purposes, and the comprehensiveness of the coverage of nonresident investment in resident securities.

**13.17** Close links with the stock exchange may be important for the compiler in other regards. The

stock exchange will be a source of information on market developments; it may well be the agency that needs to be kept informed by quoted corporations of new securities issues—helpful for information on security issues in foreign markets by residents (and domestic security issues by nonresidents); it may be the agency allocating code numbers to individual securities issued in the domestic market; and individual investors may need to inform the stock exchange of large equity holdings, thus helping the compiler to identify direct investment positions and transactions.

**13.18** Another avenue is to approach registrars, who store information on the owners of securities (for example, to make coupon payments). For instance, details of ownership of debt securities issued by the government in domestic markets are frequently held on a computerized book-entry register, with change of ownership being evidenced by an entry on this computerized register, rather than the transfer of a physical certificate. Typically, these registers contain useful information such as, for each security, the outstanding balance for each investor, and the amount of accrued interest. Also, debt securities can be valued both at market as well as nominal value and can be classified by original as well as remaining maturity. However, problems arise in identifying ownership, given the frequent use of nominee accounts, not least for administrative efficiency.

**13.19** Yet another method of measuring nonresident investment in securities issued by domestic residents is to collect data from custodians. Many countries use custodian surveys of one type or another, and an approach should be explored for compiling at least some element of the data on nonresident ownership of traded securities. Domestic securities owned by nonresidents may be deposited with local custodians for “safekeeping,” and these institutions, primarily banks, could be approached through a survey to report transactions and ownership of domestic securities by nonresidents. Such a survey can provide good coverage of resident securities denominated in the domestic currency and traded in national organized markets.

**13.20** However, resident securities denominated in foreign currency, issued and usually traded in foreign organized markets (for example, international bonds, etc.), are unlikely to be captured by such a

survey. Also, there are other possible drawbacks that the compiler needs to consider.

**13.21** The custodian may have difficulty in distinguishing residents from nonresidents, although a possible different tax treatment from that applied to residents may be one way in which this distinction can be made.

**13.22** A local custodian may be acting on the instructions of a “global” custodian, located in another economy, and so may not know the name of the beneficial owner of the security—the security might be registered in the name of a foreign global custodian. Resident custodians are likely to record security holdings in the name of the global custodians as nonresident holdings, but resident investors could subsequently purchase the securities but leave them entrusted with the global custodian, causing a mismeasurement of nonresident ownership. Periodic surveys to confirm the beneficial owner of securities may be warranted.

**13.23** Another potential problem, and one that arises with all transactions and positions reported through financial intermediaries, is the difficulty in distinguishing securities related to direct investment activity from other cross-border security activity, leading to the possibility of double counting of investment activity if direct investment data are separately collected, which is usually the case.

**13.24** Securities data from custodians can be reported on an individual or aggregate basis. As mentioned above, data reported on an individual basis is best supported by a database that records individual securities issued by domestic residents. This database can reduce the burden on the respondent and confirm the data reported. This is a method successfully employed by Austria, but, as with the Canadian system, there can be considerable resource cost for the compiling agency.

**13.25** Alternatively, aggregate data can be requested. As always, checks are required: for instance, with aggregate data a custodian might report the number of securities owned rather than their value. It should also be recognized when requesting aggregate information that custodians may not hold their records of nonresident ownership of domestic securities in a way that is conducive to external debt reporting. Therefore preliminary discussions are

essential to ascertain which data might be readily available.

### Issues of Securities by Residents in Foreign Markets

**13.26** Measuring foreign investment in securities issued abroad by residents can be difficult. Foreign intermediaries will not report to the domestic compiling agency. Swapping data with foreign compilers is one option, but this approach is difficult to implement because the compiler would need to know all the compilers to approach, and the nonresident compiler would need to have the requisite data. A more promising approach is to obtain information on gross issues and redemptions of international issues either from issuers themselves or from other sources, including the domestic stock exchange or other official bodies that should be informed of any new issues by quoted companies. International sources of information, such as the BIS international securities database, discussed in Chapter 17, could also prove useful.

**13.27** If a database of individual securities is maintained—or aggregate information on foreign security issuance is reported by resident issuers—so that net new issues in foreign markets—gross issues and gross redemptions—are recorded, and the outstanding amounts of the securities issued by residents in foreign markets can be calculated, a reasonable assumption could be that these securities are purchased by nonresidents, excluding those known to be purchased by residents. In other words, external debt in the form of nonresident investment in debt securities issued in foreign markets by residents, including government, could be calculated by, all other things being equal, netting out domestic ownership of resident debt securities issued in foreign markets from the total outstanding. Information on resident holdings of these debt liabilities could come from domestic respondents, either the investors themselves or financial institutions involved in this activity. Besides being a method of calculating an element of external debt, the resultant information on resident and nonresident ownership of debt securities issued in foreign markets is of interest in its own right, as explained in Chapter 7.

**13.28** This approach is a perfectly acceptable compilation technique and would require the compiler to

liaise with the agency that compiled data on domestic investment in domestic securities for the financial accounts. Indeed, some countries employ this technique to measure inward investment into all private sector traded securities.

### Information on Securities Involved in Reverse Security Transactions

**13.29** If the collateralized loan approach is employed to record reverse security transactions (such as repurchase agreements, repos), a memorandum table (Table 4.5) is provided in Chapter 4 for the presentation of data on securities issued by residents that residents acquire from or provide to nonresidents under these arrangements. It is expected that the majority of such transactions will occur in the domestic market, most likely in the government securities market. Most commonly, repos are transacted by financial institutions with other financial institutions, including central banks. Requiring domestic financial institutions to report domestic and nonresident securities sold to and purchased from nonresidents under reverse transactions, perhaps in their balance-sheet returns to central banks and/or statistical agencies, is likely to cover the bulk of the business. Other entities such as nonfinancial enterprises and governments may be involved in reverse security transactions, perhaps even in domestically issued securities in foreign markets. So the compiler is advised to investigate the significance of information from these institutional sectors as well.

**13.30** However, in compiling data on securities issued by residents and traded under reverse security transactions by residents with nonresidents, care needs to be taken to avoid double counting. Experience indicates that where security registers are used to identify nonresident ownership and/or where custodians report, it is not always possible to identify securities subject to repos. So, if a custodian provides information on nonresident ownership of resident securities, it may be inclusive of securities purchased and sold under reverse security transactions; that is, the information might already include resident securities acquired by nonresidents from residents under reverse transactions, contrary to the collateralized loan approach. It is very important for the compiler to understand how securities involved in reverse security transactions are recorded in the position information provided.

## Possible Mismeasurement

**13.31** Clearly, the more that transactions in domestic securities are concentrated in the domestic economy, the greater is the likelihood that domestic financial intermediaries can provide adequate coverage and, thus, a lower likelihood that there will be undercounting. The difficulty is then in ensuring that resident and nonresident owners are correctly identified and the concepts outlined in the *Guide* are adhered to.

**13.32** On the other hand, overcounting is more possible where a number of methods are used to collect data. While more than one method may be needed to ensure comprehensive coverage—for instance, the measurement of foreign investment in government securities may differ from that for private securities—the compiler should be aware of the increased possibility for the double counting of activity when more than one method is used.

**13.33** To reduce the possibility of mismeasurement, particular care needs to be taken in deciding on the respondent population; as noted in the previous chapter, a register of reporters, kept current, is essential and could be drawn from a centralized national register of reporting entities maintained for national accounts reporting purposes.

## Periodic Position Surveys

**13.34** As mentioned above, in the short term some economies might compile position data by accumulating transactions on a previous position. However, it is important to conduct periodic benchmark position surveys, perhaps once a year. The sources of position data could be different from those for transactions data. For instance, data on transactions might be compiled from information supplied by dealers or organized exchanges, whereas custodian information might be used for the position data. The results of the position survey can then be checked against the cumulative transactions data; in other words, reconciliation can be undertaken. This reconciliation is particularly important when financial intermediaries

are reporting transactions because it can reveal inconsistencies and errors in reporting that might not otherwise be spotted. In some ways, independent verification of the data is helpful for the robustness of the compilation system. Alternatively, the same institutions could be approached for both transactions and position data so that any discrepancies can be rectified and improvements made for future years.

## Counterpart Information

**13.35** Because of the need to improve the coverage of portfolio investment assets globally, and also because of the difficulty of identifying nonresident ownership of resident securities, the IMF, in cooperation with other international organizations, has promoted the development of a *Coordinated Portfolio Investment Survey* (CPIS). This survey was conducted for the first time with a reference date of end-December 1997 and was designed to collect comprehensive information, with country attribution, of resident holdings of nonresident securities, both equity and long-term debt securities. It involved 29 countries using harmonized definitions and concepts based on *BPM5*. By exchanging bilateral data, the coverage and quality of portfolio debt liabilities was also improved. The results of the first survey were published in 1999.<sup>5</sup>

**13.36** At the time of preparation of the *Guide*, the CPIS is about to embark on its second survey, with a reference date of end-December 2001, and thereafter could become a regular undertaking. As coverage is improved, such as more major investing countries participating and the weaker areas of measurement strengthened (for example, coverage of household investment), then over time these creditor-based data could gain in importance as a source of information for external debt compilers.

<sup>5</sup>See IMF (1999), *Results of the 1997 Coordinated Portfolio Investment Survey*, and IMF (2000a), *Analysis of the 1997 Coordinated Portfolio Investment Survey Results and Plans for the 2001 Survey*.

# 14. Country Experience

## Introduction

**14.1** This chapter provides case studies of country experience in various aspects of the compilation and use of external debt data. In addition, Box 14.1 discusses the European Union statistics on the excessive deficit procedure. The country case studies are provided in alphabetical order:

- *Australia*: Experience in compiling external debt data—register compilation and form design;
- *Austria*: Measurement of IIP;
- *Canada*: Measurement of foreign portfolio investment in Canadian bonds;
- *Chile*: Reconciliation of external debt statistics with BIS International Banking Statistics;
- *India*: How debt information systems are being used for external debt management;
- *India*: Monitoring and management of nonresident deposits in India;
- *Israel*: Measurement of external debt;
- *Mexico*: Registration of private debt;
- *New Zealand*: Experience in collecting foreign currency hedging information;
- *Philippines*: System for monitoring the external debt of the private sector;
- *Turkey*: Measurement of short-term external debt; and
- *Uganda*: Data requirements for the HIPC Initiative.

### Box 14.1. European Union (EU): Statistics on the Excessive Deficit Procedure

Article 104c of the 1991 Treaty on Monetary Union (the Treaty) states that EU countries should avoid excessive government deficits, and that the European Commission (the Commission) should monitor the development of the budgetary situation and of the stock of government debt. In particular, the Commission should examine compliance with budgetary discipline on the basis of whether the ratio of the planned or actual government deficit to GDP and the ratio of debt to GDP exceed a reference value. The reference values are 3 percent for government deficit, and 60 percent for debt, as specified in the Protocol on the excessive deficit procedure (the Protocol) that is annexed to the Treaty.

The Protocol defines government as general government (that is, central government, state and local government, and social security funds); the deficit as net borrowing as defined in the *European System of Accounts: ESA 1995* (Eurostat, 1996), *ESA95*; and debt as total gross debt at nominal value outstanding at the end of the year, consolidated between and within the sectors of general government. The Protocol also requires EU countries to report their planned or actual deficits and the levels of their debt promptly and regularly to the Commission, which in turn provides the statistical data used for the application of the Protocol to the Council of Finance Ministers.

This basic legislation is further developed in Council Regulation 3605/93 on the application of the Protocol (the Council Regulation). Council Regulation 475/2000 revised this Regulation, in

order to introduce the references to *ESA95*. The Council Regulation defines government debt as total gross debt at nominal value (face value) outstanding at the end of the year for the general government sector, excluding those liabilities for which the corresponding financial assets are owned by the general government sector.

Government debt is constituted by the liabilities of general government in the following categories: currency and deposits; securities other than shares (excluding financial derivatives); and loans, as defined in *ESA95*.

Some debt instruments, such as trade credits, and other accounts payable, are not included in the list of debt liabilities (because of practical considerations). Liabilities denominated in foreign currency, or exchanged from one foreign currency through contractual agreements to one or more other foreign currency, shall be converted into the other foreign currency at the rate agreed upon in those contracts and shall be converted into the national currency on the basis of the representative market exchange rate prevailing on the last working day of each year. This would also apply in the case of liabilities denominated in the national currency and exchanged through contractual agreements to a foreign currency. Finally, liabilities denominated in a foreign currency and exchanged through contractual agreements to the national currency shall be converted into the national currency at the rate agreed upon in those contracts.

**Box 14.1 (concluded)**

The Council Regulation also establishes the procedure for transmitting data to the Commission. As from the beginning of 1994, EU member states were required to report their planned and actual government deficit and levels of government debt to the Commission twice a year, the first time before March 1 of the current year, and the second time before September 1 of the current year. Before March 1 of year  $n$ , EU member states report to the Commission their estimate of the level of actual government debt at the end of year  $n - 1$  and their levels of actual government debt for years  $n - 2$ ,  $n - 3$ , and  $n - 4$ . Concerning the deficit, they report to the Commission their planned government deficit for year  $n$ , an up-to-date estimate of their actual government deficit for year  $n - 1$ , and their actual government deficits for years  $n - 2$ ,  $n - 3$ , and  $n - 4$ . They simultaneously provide the Commission for years  $n$ ,  $n - 1$ , and  $n - 2$  with their corresponding public accounts budget deficits according to the definition that is given most prominence nationally and the figures that explain the difference between these public accounts budget deficits data and their government deficit. Before September 1 the data required are the same, but instead of the estimate of the level of actual government debt at the end of year  $n - 1$ , actual data are to be provided. In member states, the exercise requires close coordination among the ministry of finance, national statistical institute, and central bank.

EU member states also provide the Commission with the figures for their government investment expenditure and interest expenditure (to calculate other ratios such as, for example, primary deficit—that is, the amount of the deficit without interest expenditure). Finally, EU member states also provide the Commission with a forecast of their GDP for year  $n$  and the actual

amount of their GDP for years  $n - 1$ ,  $n - 2$ ,  $n - 3$ , and  $n - 4$  (in order to calculate the ratios).

As mentioned above, the conceptual framework used for the measurement of government deficits and debt is the *ESA95*. In recent years, ensuring consistent recording treatment in all of the EU member states of economic and financial transactions that are not clearly defined in *ESA95* has been a problem. With the aim of ensuring consistency of recording practice, Eurostat has developed a well-defined procedure for dealing with these transactions, including statisticians from all member states working together through task forces, working groups, and other committees. Following this, Eurostat consults the Committee on Monetary, Financial, and Balance of Payments Statistics (CMFB), comprising senior representatives of central banks and national statistical institutes, as well as the European Central Bank, Eurostat, and other Commission services. After having heard the position of its members, the CMFB formulates, and presents to Eurostat, its (nonbinding) opinion. Eurostat makes the final decision in complete independence and neutrality, according to purely technical criteria. It does not decide on the individual cases as they relate to the EU member states, but rather decides on the principles of accounting treatment of specific transactions. Once determined, the Eurostat decision automatically applies to similar cases in all the EU countries. The decision on each issue is recorded in a methodological note addressed to the institutions concerned, notably the Commission, CMFB, central banks, and national statistical institutes. It is also disseminated through press releases and the Internet. The main methodological decisions have been collected in the *ESA95 Manual on Government Deficit and Debt* (Eurostat, 2000).

**Australia****Experience in Compiling External Debt Data: Register Compilation and Form Design<sup>1</sup>**

**14.2** The Australian Bureau of Statistics (ABS) compiles and publishes balance of payments and IIP statistics quarterly according to the recommendations of both the *BPM5* and 1993 *SNA*. External debt data are a part of an extended IIP dataset, which has been augmented to provide data series that meet high-priority, domestic-user requirements.

**14.3** The main data source for IIP data is the Survey of International Investment (SII). This quarterly survey collects information from business enterprises, government, investment managers, and custodians,

as appropriate, about investment activity into and out of Australia. Based on Australia's long experience, this case study provides advice on compiling a register of potential respondents to an external debt survey and on methods for survey form design that will help ensure consistent and high-quality data. Also, for information, some of the external debt data series Australia disseminates that are additional to those included in the IIP data are listed.

**Developing a register of respondent entities**

**14.4** In an open economy with a freely floating exchange rate for nearly two decades, investment flows to or from Australia are not subject to controls or regulatory approval (although for some types of corporations, approval of foreign ownership is required). In order to measure external debt, surveys are undertaken of organizations from which the data can best be obtained. Some organizations are targeted for their

<sup>1</sup>Prepared by the Australian Bureau of Statistics.

role as end-investors/investees, and others are targeted as intermediaries (investment managers or custodians) to report on behalf of their clients. To undertake such surveys, a register of entities to approach has been developed and is maintained by the ABS.

**14.5** The main ABS business register—used for surveys of the economy, and generally sourced from business taxation reports—is focused more on operating businesses with employees, rather than enterprise groups. It includes a large number of organizations that have no international investments but is deficient in its coverage of those parts of businesses involved in financing that may have no employees but through which all the international finance accessed by the group is channeled. Thus, any survey population drawn randomly from this large register for measuring international investment would be inefficient in terms of reporting load, public resources, and quality assurance. The ABS has therefore developed a separate register of enterprise groups with international involvement. Sources of information on enterprises for this specialized international investment register, and other suggested sources, are as follows:

- *Existing registers* of businesses maintained by the statistical agency or other government agencies. Enterprises on this register can be approached with brief exploratory surveys to ascertain whether they have significant external debt liabilities.
- *Existing business data collections* already run by the statistical agency or other government data-collection agencies. Information necessary for an international investment register may be elicited from another survey, either by direct inspection of the other survey's register or by adding one or two exploratory questions to that survey. A range of ABS surveys include questions that can identify potential respondents to external debt surveys, and vice versa.
- *Government administrative sources.* Depending on local legislation and administrative arrangements or the authority of the collection agency, these sources might include:
  - taxation records, files, or lists;
  - information held by foreign investment approval or monitoring boards;
  - information held by other regulatory authorities, such as lists of entities coming under their supervision and data monitored through supervision requirements (for example, registered banks, other deposit-accepting institutions, securities brokers, investment managers, investment advisers, and authorized pension or mutual funds);
  - listings of registered custodial businesses that can hold debt securities and other assets on behalf of nonresidents, and lists of registered investment managers that can act on behalf of nonresidents;
  - statutory company reports and company registration details;
  - records held in foreign exchange control or international transaction-reporting systems—for example, records identifying the originators or recipients of large portfolio investment flows (this source is not available in Australia);
  - submissions made to the Foreign Investment Review Board, various materials held by the Reserve Bank of Australia, and annual reports of other government bodies; and
  - other official and regulatory sources, many publicly available, that include annual statutory accounts for public companies held by the Australian Securities and Investment Commission.
- *Media reports.* Newspapers and periodicals are particularly useful sources for information on potential reporting entities. A high proportion of significant transactions are reported in the media, and these are used not only to update the register but also to confirm data reported in the SII. Apart from significant transactions, the media have a wide coverage of smaller transactions, and a high proportion of unusual transactions. The use of traditional print media can be supplemented with information obtained electronically from commercial business news services and via the Internet.
- *Publicly available databases* from which a wide variety of information is available. The information differs in completeness and accuracy, and in the extent to which it is of use for a survey of international investment. These sources include the stock exchange register, possibly packaged by the stock exchange with additional information; commercial equity registries' information services; international credit rating agencies' publications (Moody's, Standard & Poor's, etc.); and market research reports or services, such as reviews by accounting or brokerage firms. The ABS uses several Australian Stock Exchange products such as monthly updates of share issues listed on the exchange, and their prices and indices.
- *Trade associations,* and their reports and releases, can be a useful source. Apart from the public rela-

tions and liaison aspects of a close relationship between the statistical agency and trade associations, many either list publicly or can make available lists of members, often with indications of their importance or the range of services provided. Particularly in the financial sector, their members are also likely to be significant users of official statistics and thus have a vested interest in accurate data and assisting statistical or data collection agencies.

**14.6** As enterprises are recognized from the various sources above as potentially engaged in cross-border finance, they are included in an “exploratory survey,” which identifies if they have any foreign investment activity, and if so whether they have a parent organization in Australia from which data should be obtained. The “exploratory survey” also collects some broad investment benchmark information for use in designing the ongoing investment survey.

**14.7** The international investment survey register needs to identify the legal entities in the enterprise group not only for efficiency and quality of data collection,<sup>2</sup> but also for the identification of direct investment relationships and the categorization of some debt as direct investment capital. Periodic requests are made to the reporting organizations regarding the legal entities covered in their survey returns. This ensures that as new acquisitions are made, the survey reports capture their external debt, and that as businesses are sold off from a group, arrangements are made to continue to capture the external debt of that business.

**14.8** Other sources for maintaining the information in the international investment survey register on corporate structures include a regular review of the corporate structure of the top few hundred businesses in Australia, as well as the general press and corporate registration sources listed above.

### Survey form design

**14.9** In collecting and compiling external debt data, the ABS places a major emphasis on the reconcilia-

<sup>2</sup>The enterprise groups that report are the Australian head offices on behalf of all branches, subsidiaries, and consolidated associates, rather than each legal entity that might have an element of overseas investment or debt. Approaching entities at the group level limits the number of respondent organizations to those that can best report the information.

tion and consistency of data. First, external debt statistics are part of a broader system of financial accounts, which allows many checks for coherence and consistency. For instance, comparing data compiled on the total size of markets for the various debt instruments with individual institutional sectors’ assets and liabilities can help identify possible gaps that might relate to external debt. Second, reporting enterprises are expected to provide balanced balance-sheet data for national accounts purposes, which helps to ensure complete coverage and accuracy in reporting and sets a framework for more detailed data on cross-border positions.

**14.10** More specifically, in measuring Australia’s external debt data, the SII survey form collects inward and outward investment for the full range of debt instruments entered into by direct, portfolio, and other investors. For each debt instrument, the SII survey form is structured so that data are reported in line with the IIP reconciliation format,<sup>3</sup> including:

- The position (level or stock) of external financial assets and liabilities of residents at the beginning and end of the survey quarter;
- Financial transactions (investment flows) resulting in increases and decreases in the levels of these assets and liabilities each quarter;
- Other changes in the levels of these assets and liabilities; and
- Income that has accrued on these assets and liabilities.

**14.11** Using this IIP reconciliation format not only forces respondents to consider the consistency of the data reported, it also enables compilers to readily identify and query inconsistencies in the reported data. The ABS has found that full data on transactions, and the other reasons for the change in positions each quarter, are usually available.

**14.12** The format and wording used in the collection forms, together with the wording in the detailed explanatory notes that are supplied to all respondents, are closely aligned to the wording in *BPM5*. The explanatory notes provide numerous examples of what should be included (and excluded) for each type of debt instrument.

<sup>3</sup>That is, the difference in opening and closing positions is “explained” by transactions, valuation changes, and “other adjustments.”

**14.13** One of the advantages of collecting all the data on international investment on the same form (in the case of the SII, on the same page for each instrument) is that the possibility of double counting is eliminated. Because the boundaries between debt and equity, and direct, portfolio, and other investment are subject to different interpretations, and also subject to error and mismeasurement, a valuable consistency check on the data is provided by requiring that the disaggregated data sum to a total; that is, the report form is internally consistent. Collecting debt and equity data separately, sometimes even by different agencies, inevitably creates the potential for under- and/or double counting.

**14.14** To further enhance the quality of external debt statistics, a substantial proportion of Australia's domestically issued external debt securities is measured by the reporting of individual securities owned by nonresidents. These securities are held by custodians on behalf of nonresident clients, and full identification of the holdings is obtained. Information on prices is used to estimate the transactions and price changes between the reported positions.

#### **Extensions to IIP data**

**14.15** As mentioned above, the ABS has extended the IIP dataset to meet domestic users' needs for external debt statistics. The more important extensions include:

- A more detailed institutional sector breakdown of the debtor so that, for example, the external debt of the financial sectors can be analyzed in more detail than set out in *BPM5*;
- A public/private ownership dissection of Australian debtors;
- A presentation of external assets held in the form of debt instruments, as well as external debt liabilities so that each institutional sector's gross debt can be seen in the context of each sector's net external debt;
- A presentation of external debt by location of issuance (debt issued in Australia and debt issued abroad); and
- The classification of external debt assets and liabilities both by type of currency and by remaining maturity (based on the final maturity date of the debt).

**14.16** Remaining-maturity data on a final maturity date basis can be used to approximate debt-service

schedules for principal, given that, for Australia, the amounts of part payments of principal on external debt are small and so are not separately collected. The security-by-security reporting for debt issued by entities domiciled in Australia provides precise data for the cash-flow elements of debt amortization schedules, but the requirement for separating principal and interest in amortization schedules necessitates interest rate forecasting for other instruments.

## **Austria**

### **Measurement of IIP<sup>4</sup>**

**14.17** External debt statistics of Austria are derived from the information published on the IIP. This case study sets out the process by which the Austrian IIP data are compiled, and their relationship with external debt and financial accounts data. There are three sections, covering the collection system for the IIP and balance of payments—because some IIP items are compiled by accumulation of flows; the method of compiling the IIP, including all particularities of individual items; and the links among the IIP, external debt, and the financial accounts data.

### **The collection system**

**14.18** The current collection system for balance of payments and IIP data was introduced in 1991. It is a “closed system” in that it is self-balancing, with beginning and closing stocks reported along with transactions. The stocks data are used for the compilation of the IIP (mainly other investment), and the transactions are incorporated into all areas of the balance of payments. There is continuous monitoring of foreign payments.

**14.19** Reports are received from the banks and nonbanks, with the bank reports comprising information on the banks' accounts held abroad, and on accounts held with domestic banks by foreign banks and nonbanks. Nonbanks report on their accounts held abroad, intercompany working balances, and clearing accounts. Detailed transactions data reported

<sup>4</sup>Prepared by the Oesterreichische Nationalbank. For further reference, see Oesterreichische Nationalbank (2000); European Central Bank (1999); Oesterreichische Nationalbank (1995), *Reports and Summaries*, 1/1995; and Oesterreichische Nationalbank (1999), *Focus on Austria*, 1/1999.

include the nature of the counterparty, Austrian or foreign, and, if the latter, the country of residence. Reports have to be provided for all combination of currency, country, and type of accounts relevant to the balance of payments (short-/long-term, deposits/loans, assets/liabilities, etc.). Annual and quarterly surveys of trade credits are incorporated both in the balance of payments and the IIP.

**14.20** The Oesterreichische Nationalbank (ONB) maintains both a comprehensive company database and a comprehensive database of securities. The company database is used to make correct sectoral allocations of reported transactions, particularly in the area of income, transfers, and the financial account. The securities database is used in conjunction with portfolio investment collected from banks and nonbanks to produce outstanding stocks of portfolio investment (see the section “Measurement of Portfolio Investment,” below).

**14.21** Annual surveys of direct investment stocks are conducted, and information on the direct investment relations between Austrian and foreign companies derived from these surveys are used to identify transactions and stocks of direct investment loans, and flows of direct investment income reported elsewhere. In combination with general economic indicators (such as nominal GDP) and expectations, the survey data are used to estimate reinvested earnings. To anticipate and identify direct investment transactions, information is taken from various news sources.

#### Reporting agents

**14.22** In order to reduce the reporting burden for respondents, direct investment below certain thresholds (below Austrian schillings (ATS) 5 million for inward investment and below ATS 10 million for outward investment) only have to be reported every two years by alternate surveys; that is, half of the enterprises concerned report in the first year and the other half in the second year. For those enterprises that do not report direct investment stocks for a certain period, estimates are made on the basis of the report of the previous year.

(i) The *banking sector*: The following entities are required to report: credit institutions, building and loan associations (*Bausparkassen*), enterprises that carry out factoring business, and all enterprises undertaking business similar to “banking.” Accord-

ing to the Foreign Exchange Act (*Kundmachung* DL 1–3/91, 2/93, 1/96), banks are required to report, on a daily/monthly basis, all transactions carried out via the domestic banking system, including transactions on behalf of their customers. More specifically, they report the following:

- All settlements carried out through the accounts of domestic banks held abroad and through the accounts of foreign banks and nonbanks held by domestic banks as well as the beginning and end-of-month *stocks* of these accounts (*Devisentableaumeldung*);
- All sales/purchases and (beginning/end-of-month) stocks of foreign currency transactions (*Valutentableaumeldung*, over-the-counter or OTC money); and
- Monthly stocks of securities, as defined in the *BPM5*, that banks acting as primary custodians hold for their own account or on behalf of their resident and nonresident customers (*Wertpapierstandmeldung*).

**14.23** In addition, banks (acting as a direct investor and/or as a direct investment company) are requested to respond to an annual survey concerning direct investment if the value of the nominal capital of the direct investment exceeds the threshold of ATS 1 million and 10 percent of overall nominal capital, or if the nominal capital does not exceed ATS 1 million but the balance-sheet total of the direct investment enterprise exceeds ATS 500 million and the 10 percent criterion is fulfilled.

(ii) The *nonbank sector* (enterprises and households not included in (i)): According to the Foreign Exchange Act (*Kundmachung* DL 1–3/91, 2/93, 1/96), nonbanks are required to report on a monthly basis all settlements and positions on accounts held with banks abroad as well as short-term and long-term loans granted to nonresidents or provided by nonresidents to residents, if the annual volume of transactions exceeds a certain threshold (*Auslandskontenmeldung*), or otherwise on an annual basis. Nonbank private companies and private households (acting as a direct investor and/or as a direct investment company) are requested to respond to an annual survey concerning direct investment if the value of the nominal capital of the direct investment exceeds the threshold of ATS 1 million and 10 percent of overall nominal capital. In addition, companies have to submit quarterly and annual surveys (covering a selected sample and a full range, respec-

tively) on trade credits. In addition, nonbanks (including general government) are requested to report annually their holdings of domestic and foreign securities held outside the custody of domestic banks (held in safekeeping, held in custody with banks, etc.), unless the total market value of these holdings of securities is less than the threshold of ATS 1 million at the end of the year.

(iii) *General government*: Public authorities report all transactions of relevance to the balance of payments to the ONB. In addition, some data that are used for checking purposes are received from the Federal Ministry of Finance (particularly concerning the area of current and capital payments of the public sector vis-à-vis EU institutions).

(iv) *Monetary authority*: The ONB reports on the external monetary position and monthly flows and stocks in the same way as the banking sector. Special quarterly reports on stocks and flows are also compiled by the Accounting Department of the ONB for balance of payments and IIP purposes. These reports are mainly used to check monthly flows, to obtain data on an accrual basis, and to calculate reserve assets for the IIP.

#### *Measurement of portfolio investment*

**14.24** Portfolio investment flows and stocks are measured through a comprehensive and reliable compilation system that is based on the reporting of securities on a security-by-security basis. To facilitate this work, a database of individual securities is maintained (see below). This system, developed during 1988–89, is not only reliable but provides the flexibility to meet changing user requirements and market circumstances. Previously, the experience had been that with the fast-developing international financial markets, instructions to reporting agents were becoming increasingly complicated in order to meet the needs of the balance of payments and IIP.

**14.25** With the present system, the banks report transactions and stocks of individual securities, identifying each with the ISIN code. The Austrian banks appreciate using the ISIN codes since these codes are required for their own business purpose (for example, the settlement of security transactions). Once a security is reported with an ISIN code, it can be identified in the securities database that the ONB maintains. The database contains the necessary balance of payments and IIP classifications (the nature

of the financial instrument, the sector and country of issuer, etc.). Because securities are reported on an individual basis, transactions and stocks can be reconciled.

**14.26** The securities database was developed and is maintained by the ONB. The core of the database relies on information purchased from the Austrian and German national numbering agencies (NNAs)—the Oesterreichische Kontrollbank (OKB) and the German Wertpapiermitteilungen. The OKB provides data on securities issued by residents in the domestic market, and Austrian schilling or euro-denominated securities issued by nonresidents in Austria; the Wertpapiermitteilung provides data on securities issued in foreign markets, including securities issued by Austrian residents and denominated in currencies other than the Austrian schilling or euro. Also, reporting banks have to supply information on securities that to the best knowledge of the reporting bank do not have an ISIN code—so-called internal securities. If information on the same security is received from more than one institution, then the OKB data are usually given preference. Information on current market prices is obtained from the Telekurs. The database is updated on a weekly basis.

**14.27** Using the information gathered on individual securities, the Statistics Department generates an “internal master file” of data, which is used by the ONB for the compilation of portfolio investment transaction and stock data. In early 2000, this master file contained around 150,000 debt securities and some 50,000 equity securities, thus covering around 99 percent of the securities traded by Austrian residents on a cross-border basis.

**14.28** Comprehensive quality checks and amendments are made by the ONB in order to render the information received from external sources suitable for use in the IIP and balance of payments compilation. These checking procedures comprise formal controls (completeness of information), as well as plausibility checks. Detailed quality checks are required not least because the NNAs maintain their databases for their customers (banks), whose business needs for information differ from those of statistical compilers. Consequently, data fields that are particularly important for statistical purposes (for example, outstanding amount) are not always of the desired quality.

### Compiling the IIP

**14.29** An annual IIP statement is drawn up consistent with the recommendations of *BPM5*, with a few exceptions. A geographical attribution between euro-area and non-euro-area data is possible to a substantial extent. This section explains the compilation procedure for individual functional categories of the IIP.

#### *Direct investment*

**14.30** For direct investment, Austria follows the recommendations of the international standards, including both the application of the so-called directional principle (that is, assets and liabilities reported according to the direction of the direct investment relationship) and the inclusion of reinvested earnings. The annual direct investment survey provides final position data some 18 months after the reference end-period (time  $t$ ). Provisional position data, available six to nine months after the reference end-period ( $t$ ), are calculated by adding accumulated flows (including reinvested earnings) to the previous end-reference period ( $t-1$ ).

**14.31** One exception is data for real estate, which are compiled exclusively using accumulated flows (approximately 7 percent on the assets side and 2 percent on the liabilities side of overall assets and liabilities of direct investment stocks, respectively).

**14.32** Because the data from the annual survey are valued at book value, the reconciliation with recorded transactions (at market value) is problematic. Although price and other adjustments (in the sense of reclassifications) can be identified to a limited extent, “other adjustments” (in the sense of the residual adjustment between changes in stocks and transactions) can be very high. Exchange rate adjustments are calculated on the basis of average monthly exchange rates when IIP positions are derived from the accumulation of flows, and end-of-month exchange rates when IIP positions are directly measured.

**14.33** Market valuation can be compiled additionally based on an “earning-method estimation” (that is, discounting potential future cash earnings).

#### *Portfolio investment*

**14.34** Portfolio investment data are compiled in conformity with the *BPM5* recommendations,

including the appropriate instrument and sector attribution. As described above, the security-by-security reporting system combined with the securities database is at the core of the compilation of these data—on both stocks and transactions, and inward and outward investment. On the asset side, the monthly bank and annual nonbank reports provide reliable position data on domestic sector asset holders.

**14.35** As a consequence of the security-by-security approach, stocks, transactions, exchange rate, and price adjustments are closely reconciled, with remaining differences calculated by residual; other adjustments for sectoral and instrument adjustments can be identified; and stocks are valued at market prices, including interest costs that have accrued. Country attribution is possible for the asset information, based on the country of residence of the issuer, but the country of the owner of the domestic debt liability is not known.

#### *Financial derivatives*

**14.36** IIP data for financial derivatives are a combination of stocks (approximately 20 percent of the total) and accumulated transactions (approximately 80 percent of the total). These data largely cover OTC (or off-exchange) derivatives. The stock data, reported using ISIN codes, are highly reliable and are calculated at market prices; for other reported data no clear valuation principle can be identified, although it is believed they are measured at close to market value. Stocks are available on a net basis; there are no fully reliable stock data available on a gross basis.

#### *Other investment*

**14.37** Other investment data are compiled mainly in conformity with the *BPM5* recommendations, with the exception of trade credits between affiliated enterprises, which are indistinguishably included in the “other investment” item instead of being recorded under direct investment. A combination of stocks (approximately 90 percent of the total) and accumulated flows (approximately 10 percent) is used to calculate these data. The stock data are mainly derived from the settlement system with the exception of trade credits, which are measured directly from quarterly and annual surveys. For loans and other assets/liabilities where positions are below the thresholds for direct reporting by reporting agents, accumulated flows are used to calculate positions.

**14.38** Reporting agents have to reconcile, in the same report, stocks and flows for “other investment” accounts. Price adjustments (mainly relating to asset trading), other adjustments (reclassifications), and residual adjustments (reporting errors or stock corrections) can be taken directly from the reports provided. Exchange rate adjustments are calculated using average monthly exchange rates for transactions and for reported adjustments, and end-of-month exchange rates for stocks. Other investment assets and liabilities are based on nominal values.

#### *Reserve assets*

**14.39** The stock position for reserve assets is directly reported by the Accounting Department of the ONB in the form of special quarterly reports. These reports comprise stocks, transactions, and all kinds of adjustments. The data are taken directly from the accounting database. Stocks and transactions of currency and deposits are not included in the special quarterly reports because they are already covered by the regular monthly reports submitted by the ONB (see item (iv) under “Reporting Agents,” above). Discrepancies between accounting principles and *BPM5* concepts are seen as being insignificant. Stocks are reported on a market value basis, including closing market prices for gold and closing midmarket exchange rates.

#### **Relationship of IIP with external debt and financial accounts**

##### *Gross external debt*

**14.40** Austria’s gross external debt position can be derived from the IIP. At present, external debt data are compiled at market price and are broken down by sector. Data on a remaining-maturity basis are available in the case of debt securities.

##### *Financial accounts*

**14.41** The financial accounts implemented by the ONB in accordance with the *European System of Accounts: ESA95* (Eurostat, 1996) cover, in the form of asset and liability statements, the financial claims and liabilities of all institutional sectors. The balance sheet of the “rest of the world” sector for the financial accounts draws heavily on the IIP data. Thus, the position “nonresidents’ net financial assets” (financial accounts) corresponds to the domestic sectors’ “net liabilities to the rest of the world” (IIP). The latter denotes a negative net IIP position—that

is, “net claims of the rest of the world sector on Austrian residents.”

## **Canada**

### **Measurement of Foreign Portfolio Investment in Canadian Bonds<sup>5</sup>**

**14.42** Nonresidents have been sharply increasing their investment in Canadian bonds since the 1980s. From a value of Can\$56.5 billion in 1980, the investment of foreigners reached Can\$393 billion by 1999, more than 40 percent of the value of all Canadian bonds outstanding. The interest on these debt obligations (Can\$27.5 billion in 1999) is a major factor in the deficit for investment income in Canada’s current account. Given the magnitude and the wide diversity of bonds held by nonresidents, Canada has a detailed and complex statistical system to help ensure adequate and consistent statistics.

**14.43** Data on nonresident investment in Canadian bonds is largely reported on a security-by-security basis by (1) major investment dealers, banks, insurance companies, and pension and mutual funds, on a monthly frequency, and (2) the largest debt issuers. These data are reported on a monthly basis, mainly on electronic tapes supplied by information service providers. Data are provided using a specific record layout describing the detailed characteristics of the instruments. Each month, more than 500,000 security transactions are collected, of which about 10,000 relate to Canadian bonds. Year-end position data are obtained from an annual census survey, with positions calculated according to four different methods of valuation.

**14.44** The Canadian system is dependent on a database that maintains detailed characteristics on each specific bond issued. Indeed, each Canadian bond issue is identified by issuer, sector (federal government, private sector, etc.), and industrial classification; for each bond held by nonresidents the dates of issue and of maturity, the currency of issue, the interest rate, the timing of interest payments, etc. are identified; and nonresident holders are identified on the basis of their respective country of residence, when available, or at least by broad geographical

<sup>5</sup>Prepared by Statistics Canada.

area, and whether or not they are related to the Canadian issuers.

**14.45** Using the detailed information on individual bonds, this case study reviews how these statistics are generated for the transactions and positions data and describes the various prices that are used to value bonds.<sup>6</sup>

### **Financial transactions and positions**

**14.46** There are four types of financial transactions that affect the position data: new issues, trade in existing securities, accrual of interest, and redemptions.

#### *New issues*

**14.47** In the Canadian system, new bond issues sold to nonresidents are restricted to newly issued Canadian bonds floated directly abroad (that is, foreign issues and the portion of global issues floated in the foreign markets). Nonresident purchases of new Canadian bonds floated in the domestic market, including the domestic portion of global bonds, are classified as trade in existing issues. Transactions associated with new issues denominated in foreign currencies are entered in the system in their original currencies and are converted into Canadian dollars using the noon average exchange rate of the month in which the transactions took place. When the Canadian dollar proceeds from the new issue are known, this information is directly used as the value of the transaction.

#### *Trading of existing bonds*

**14.48** Trading in Canadian bonds involving residents and nonresidents largely occurs in domestic issues, especially Government of Canada bonds. For bonds traded in the same month and year of their issue, the system deems the trading to have occurred at the date of new issue; otherwise, the trading is deemed to have occurred on the fifteenth day of the month of trading.

**14.49** Bonds traded under repurchase agreements (repos) are effectively loans with the bonds used as collateral. Since respondents include them in their monthly trading, these transactions are reclassified from portfolio investment to loans. This can be eas-

ily achieved for financial intermediaries that separately identify trading of securities involving repos. Where financial intermediaries do not separately identify securities involved in repos, the system matches the sale and purchase of the same securities in a single month and evaluates a yield rate in order to identify transactions to be classified as repo transactions.

**14.50** Transactions involving stripped securities—that is, the coupon payments are traded separately from the principal amount—are processed as transactions in bonds issued by the original issuer but are not linked back to the specific bond issue that was stripped. The strips are recorded as zero-coupon bonds, with income calculated as the difference between the transaction price and the redemption value.

**14.51** For a number of reasons, a few security dealers do not identify transactions in existing bonds on a security-by-security basis. These bonds are regrouped by sector of issuer and are treated as a component of a synthetic single issue of the sector (for example, bonds issued by provincial governments). Once adjusted to exclude bonds under repos and strips, the system checks that each bond traded has previously been recorded in the system as having been issued. If not, an adjustment is made in the inventory to record the bond as a new issue.

#### *Accrual of interest costs*

**14.52** In the Canadian system, the difference between the issue price and the redemption price accrues as interest over the life of the bond. In addition, the system computes the accrual of coupon payments on each outstanding bond issue. Until paid, these two components continuously increase the value of the bond, and Canada's stock of external debt in bonds.

#### *Redemptions*

**14.53** Redemptions represent the amount of the principal payment made by the issuer at the date of maturity of the bond. Redemptions are generated automatically by the system at maturity. While there is generally one date of maturity, some bonds may have several maturity dates as the redemptions are spread over time (for example, sinking funds bond). For bonds issued in tranches, the system prorates the redemptions according to the weight of the tranches. Redemptions of bonds in foreign curren-

<sup>6</sup>A fuller description of the Canadian system is available on the Internet at the IMF website, <http://www.imf.org/external/bopage/stindex.htm>.

cies are converted into Canadian dollars at the monthly noon average rate for the month of redemption. Again, when the Canadian dollar proceeds are known, this information is used to calculate the value of redemptions.

### **Valuation of financial transactions and positions**

**14.54** From the time a bond is issued through to the time it is redeemed, its price fluctuates largely as a result of movements in interest rates in the market. In the Canadian statistical system, four prices are maintained: issue price, book value, market price at year-end, and redemption price. In turn, each of these prices is used to derive the related statistics. For example, the prices on new issues are used to derive capital flows associated with new issues, while redemption prices are used to generate redemptions data. Transactions, both sales and purchases for the month, are recorded at market prices. The stock of outstanding bonds is currently valued at book—or nominal—value and at market value.

#### *Issue prices*

**14.55** At the time of issue, the bonds are generally priced at the prevailing market price. This market price is in turn equivalent to the present value of the stream of future payments, discounted at the market interest rate. If the coupon rate is set equivalent to the prevailing interest rate, the issue price will be the same as the redemption price. If the coupon rate is different from the prevailing interest rate, the issue will be priced at discount or premium to the redemption price.

**14.56** In general, a bond is issued on a given date and, hence, has one issue price. There are, however, bonds, especially Government of Canada bonds, that are issued in tranches over a period of time. Each tranche has the same maturity date and coupon rate as an existing issue, but the issue price of each tranche varies according to the interest rate prevailing at the time the tranche was issued. Hence, each tranche of these bonds may have a different issue price.

#### *Book value*

**14.57** The book value can be calculated from different viewpoints. From the point of view of the issuer of a bond, the book value is the issue price plus the accrual of interest costs not yet paid out. From the viewpoint of the owners of the bond, the book value

consists of the acquisition cost plus the income earned but not yet received. Given that bonds may have been purchased at various prices, there could be many book values.

**14.58** In the Canadian statistical system, only the book value of the issuer is maintained. This book value is made up of the issue price plus the accrual of interest costs not paid out by the issuer. The interest is calculated as the accrual of the coupon plus the accrual of the difference between the issue price and the redemption price. Hence, at any given time, the book value—nominal value, in the terminology of the *Guide*—of the issuer is made up of three parts: the issue price, the accrual of the coupon not yet paid out, and the amortization of the discount/premium, if any, between the issue and the redemption prices.

#### *Market prices*

**14.59** *Description of market prices.* At a given time, the current market price of a bond is usually calculated using a sample of recent buying and selling transactions in financial market. Throughout its lifetime, a bond will have many market prices depending on the time at which the value is observed. For instance, the issue price is, in most cases, the market price that prevailed at the time the bond was issued, and the redemption price is the market price that prevails at the time the bond matures.

**14.60** *Derivation of market prices.* In the Canadian system, market prices are either observed from information obtained in the bond trading survey in the month preceding the valuation, or calculated. To the extent that bonds are traded with nonresidents in the month preceding the period of valuation, such as December trading for end-December valuation, the average price in such trading is used as the proxy for market prices when calculating transactions. For bonds whose market price are not readily available, the system estimates the present value of the future stream of payments of the bond using a market yield matrix. The matrix enables one to generate market prices for a broad range of Canadian bonds (by sector, currency, and years left to maturity) and is regularly updated in the system.

#### *Redemption prices*

**14.61** The redemption price is the amount the issuer is required to pay the holder at maturity of the bond; it is the future value of the principal after the

coupons have been paid out. The redemption price of a bond is the same as the market price that will prevail on that bond at the date of its maturity.

### **Features of the system**

**14.62** The degree of detail maintained and the flexibility of the Canadian system make it possible to generate numerous outputs on nonresident ownership of Canadian bonds. Canadian bonds can be valued according to four different methods: issue price, maturity price, book (nominal) value, and market value. The market value is published in Canada's IIP.

**14.63** Functions are integrated in the system to derive positions, transactions, interest (paid, accrued, or payable), and commissions for a specific period of time in original currency or Canadian dollars. Exchange rate effects on the positions can also be calculated. In addition, Statistics Canada can calculate the funds that will be needed to service the debt in the years to come, taking into account the coupons to be paid as well as the retirements. The remaining term of maturity can also be calculated by type and by sector.

## **Chile**

### **Reconciliation of External Debt Statistics with BIS International Banking Statistics<sup>7</sup>**

**14.64** If international capital markets are to function properly, statistics on debtor countries' external liabilities are necessary. But when the figures published by a country, from the debtor perspective, differ from those published by international agencies, from the creditor perspective, experience has shown that the credibility of the statistics published by the country is directly affected, leading to uncertainty about actual indebtedness, and so to inefficiency in the capital markets.

**14.65** As with a number of other countries, Chile is one of the countries whose external debt statistics, disseminated monthly by the Central Bank of Chile (BCCH), do not coincide with the international banking statistics published by the BIS. To reconcile

<sup>7</sup>Prepared by the Central Bank of Chile.

the two institutions' figures, in August 1998 the Management Office of the International Division of the BCCH committed resources to undertake extensive research, and establish the necessary contacts with both the BIS and the monetary authorities of various countries, to discover reasons for the discrepancies. The work culminated in a visit by BCCH officials to the BIS in Basel, Switzerland, in late 1999. One of the conclusions of the investigation was that BIS statistics embody a broader concept than external debt as measured by the BCCH. Whereas the central bank publishes external debt statistics, the BIS data refer to claims against the country, including items such as local claims in foreign currencies to residents in Chile and other liabilities that are not within Chile's core definition of external debt.

**14.66** Drawing on this work, and using data for end-June 1999, this case study explains why differences arise between the external liability figures published by the BCCH and the BIS.

**14.67** As explained in Chapter 17, the BIS publishes international banking statistics on both a locational and a consolidated basis. This case study first compares BCCH data with BIS locational-based data, and then with BIS consolidated data, before drawing some conclusions.

### **Comparison with BIS locational data**

**14.68** BIS locational data provide information on the external assets and liabilities of all banks—known as BIS reporting institutions—located in what is known as the BIS reporting area.<sup>8</sup> Within external assets, the value of the external loans outstanding is shown separately, with an attribution by currency, institutional sector, and country of debtor. BCCH's research has discovered that the statistics published by the BCCH on debt to foreign financial institutions are more comparable with the BIS's external loans data than with the BIS's external assets data.

<sup>8</sup>At the time of writing, the reporting area comprises the G-10 plus eight countries: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States. The quarterly reports also include the so-called offshore centers: The Bahamas, Bahrain, Cayman Islands, Hong Kong SAR, the Netherlands Antilles, and Singapore.

**Table 14.1. Outstanding External Loan Claims of BIS Reporting Institutions on Chile, as at End-June 1999**

	Millions of U.S. Dollars
(1) BCCH reported data	15,901
(2) BIS reported data (locational basis)	18,684
(3) Discrepancy between sources ((1) – (2))	–2,783

**14.69** Table 14.1 presents the outstanding external loan claims of BIS reporting institutions on Chile as at end-June 1999, as reported by the BCCH and BIS. As can be seen, the BIS reports a total \$2,783 million higher than that reported by the BCCH.

**14.70** On investigation, the difference is largely explained by three items that the BCCH does not classify as external loans from BIS reporting institutions.

**14.71** First, the BIS apparently includes in its figures external loans used to finance foreign trade provided in the form of instruments issued by the debtor to the foreign supplier or third party, which are subsequently discounted by banks (thus becoming a form of forfeiting activity). In Chile these instruments are known as *cobranzas*. In contrast, at the time of writing, the external debt figures published by Chile include only those *cobranzas* of medium- and long-term maturity, which are classified as debt owed to suppliers.<sup>9</sup> According to the BCCH's estimates, total *cobranzas* (short-, medium-, and long-term) at end-June 1999 amounted to approximately \$5,425 million, of which \$1,900 million could be claims held by BIS reporting institutions, with remaining maturities up to one year,<sup>10</sup> and thus reported as short-term claims in BIS statistics.

**14.72** Second, in its published data, the BCCH attributes lending provided to Chile by foreign

<sup>9</sup>Because debtors are the source of information, these loans are classified as debt to suppliers, even though they are subsequently discounted by banks in the BIS reporting area (forfeiting).

<sup>10</sup>The estimate of short-term claims is derived from the BIS consolidated data, which does provide a breakdown of claims by short-term remaining maturity.

**Table 14.2. Adjusted Data for Outstanding External Loan Claims of BIS Reporting Institutions on Chile, as at End-June 1999**

	Millions of U.S. Dollars
<b>Reported data</b>	
(1) BCCH reported data	15,901
(2) BIS reported data (locational basis)	18,684
(3) Discrepancy between sources ((1) – (2))	–2,783
<b>Factors explaining the discrepancy between sources<sup>1</sup></b>	
(4) <i>Cobranzas</i> (forfeiting activity)	1,900
(5) Debt with government financial institutions	721
(6) Loans used to finance operations abroad	500
(7) Total adjustment ((4) + (5) + (6))	3,121
<b>Adjusted difference (discrepancy (3) plus total adjustment (7))</b>	<b>338</b>

<sup>1</sup>A positive figure indicates amounts reported by the BIS as external loan claims on Chile that are not included in BCCH data for external loans from BIS reporting institutions.

government financial institutions for specific projects to government agencies. On the other hand, even though the government institutions concerned are not BIS reporters, some such lending is included in the BIS locational (and consolidated) banking statistics. For instance, lending by the Kreditanstalt für Wiederaufbau (KfW) is included in the reports sent by Germany to the BIS, while lending by the Export Development Corporation of Canada (EDC), which is also not a BIS reporter, is included in the reports prepared by the financial institutions with which it deals. For end-June 1999 data, these two agencies accounted for \$721 million of the difference between BIS and BCCH data.

**14.73** Third, loans contracted by Chilean enterprises and used to finance investments directly abroad are not recorded in the BCCH data but are included in both the BIS's locational and the consolidated banking statistics. At end-June 1999, these loans amounted to \$500 million, of which 20 percent was of a short-term remaining maturity.

**14.74** As can be seen from Table 14.2, the three factors discussed above more than account for the difference between the BIS and BCCH reported data.

**Table 14.3. Outstanding External Claims of BIS Reporting Institutions on Chile, as at End-June 1999***(Millions of U.S. dollars)*

	Total	Short-term <sup>1</sup>	Medium- and long-term
<b>Reported data</b>			
(1) BCCH reported data	15,850	3,911	11,939
(2) BIS reported data (locational basis)	23,491	9,347	14,144 <sup>2</sup>
(3) Discrepancy between sources ((1)-(2))	-7,641	-5,436	-2,205
<b>Factors explaining the discrepancy between sources<sup>3</sup></b>			
(4) Foreign currency assets of offices of foreign banks	3,343	2,454	889
(5) Bonds	823	253	637
(6) Cobranzas (forfaiting activity)	1,900	1,900	0
(7) Debt with governmental financial institutions	721	84	570
(8) Loans used to finance investments abroad	500	100	400
(9) Total adjustment ((4)+(5)+(6)+(7)+(8))	7,287	4,791	2,496
<b>Adjusted difference (discrepancy (3) plus total adjustment (9))</b>	<b>-354</b>	<b>-645</b>	<b>291</b>

<sup>1</sup>On a remaining maturity of one year or less.  
<sup>2</sup>Includes foreign liabilities whose maturity cannot be determined.  
<sup>3</sup>A positive figure indicates amounts reported by the BIS as external claims on Chile that are not included in the BCCH data for external liabilities to BIS reporting institutions.

**Comparison with BIS consolidated data**

**14.75** The BIS consolidated international banking data provide information on the external assets of banks headquartered in the reporting area, excluding banks headquartered in certain offshore centers (which are included in the locational data). Consolidation means that all the claims of each bank, including all offices throughout the world, are reported, except intrabank claims, which are excluded. Branches and subsidiaries of banks located in the reporting area but headquartered outside the reporting area provide information only on their own claims and liabilities (that is, on an unconsolidated basis). The consolidated BIS data include a breakdown by debtor sector and by short- and long-term remaining maturity and present the debtor position of each country vis-à-vis each of the creditor countries. Loans are not shown separately. Taking all this into consideration, it is clear that the asset figures of the locational and consolidated data differ substantially.

**14.76** As with the locational data, it can be seen in Table 14.3 that the outstanding external claims of BIS reporting institutions on Chile as at end-June 1999 as reported by the BIS were higher than those

reported by the BCCH (\$23,491 million and \$15,850 million, respectively).<sup>11</sup>

**14.77** In addition to the three items discussed above, one of the reasons for the difference is that the BIS considers local foreign exchange positions of offices of foreign banks resident in Chile as external liabilities of Chile, whereas in measuring external debt, liabilities of residents to other residents are excluded. These positions amounted to \$3,343 million<sup>12</sup> at end-June 1999, and were financed in large part by funds obtained on the local market.

**14.78** The data on bond claims of BIS reporting institutions are another potential source of discrepancy. However, the value of the claims of BIS reporting institutions are unclear, since they are not separately identified in either the BIS or BCCH data. Bond liabilities to nonresidents are included by the BCCH in Chile's external debt statistics, but individ-

<sup>11</sup>The BCCH reported data in Table 14.3 are those for loans with BIS reporting institutions in the reporting area, converted to a consolidated basis so as to make the data comparable with those of the BIS.

<sup>12</sup>Source: Financial information of the Superintendency of Banks and Financial Institutions.

ual groups of creditors are not identified. At end-June 1999, Chile's total bond liabilities were valued at \$4,116 million, and it is estimated that around 20 percent, or \$823 million, represented claims by BIS reporting institutions, on a consolidated basis. Of this total, \$253 million were thought to be of short-term maturity. It is known that many of these Chilean liabilities are held in the United States by financial institutions such as investment funds and bank holding companies. These institutions are required to report their holdings of such securities to the U.S. Federal Reserve for inclusion in the report entitled "Country Exposure Lending Survey," which is the source of the statistics reported to the BIS by the U.S. authorities.

### Conclusions

**14.79** From the research undertaken by the BCCH, the following conclusions can be drawn:

- To ensure proper use of data, and for comparisons to be made between figures that are conceptually measuring the same thing, the methodological framework used to compile published data should be clearly explained by each disseminating agency.
- The primary data sources (debtors for the BCCH and creditors for the BIS) are responsible for significant differences, especially in the case of debt transferred to a different creditor. In particular, for certain claims reported to the BIS, such as bonds, while they are included in Chile's external debt statistics published by the BCCH, they cannot be allocated to a specific creditor.
- There is the need to clarify the nature of the items reported to the BIS. For instance, the BIS considers local foreign exchange positions of offices of foreign banks in Chile an external liability, although they represent a claim by a resident on another resident. Whether these claims should be regarded as external liabilities is obviously debatable (they are not in this *Guide*), since the position is financed with local resources and therefore does not represent net indebtedness abroad.
- Quality control is essential and has a major impact on the comparability of statistics published by different institutions. Consequently, ensuring correct application of established methodology should always be a concern.
- To provide more complete external debt statistics, Chile is currently working on the compilation of data for instruments such as cobranzas and loans used to finance investments abroad, which,

although falling into the category of external debt, are not included in Chile's debt statistics because the necessary information is not available. To solve this problem, surveys and other data-collection methods are being introduced.

## India

### How Debt Information Systems Are Being Used for External Debt Management<sup>13</sup>

**14.80** Effective monitoring is a prerequisite for successful debt management. Indeed, information on the status and composition of external debt and debt-service payments provides the basic input for debt-management decisions. With the enormous growth in the volume and complexity of loan records, debt-management decisions require the easy retrieval of information, and the ability to undertake analysis and scenario-building exercises, such as the examination of the impact of alternative debt-management strategies. In this context, manual record keeping is no longer sufficient; rather, there is a need to develop a computerized database that will facilitate both information retrieval and scenario exercises.

**14.81** In India, comprehensive coverage, active monitoring, and the computerization of external debt data have all played a key role in the continuous improvement of the country's external debt position (Table 14.4). The exhaustive coverage and timely availability of data has allowed effective monitoring of the debt stock and debt-service payments. For instance, information on projected debt-service payments—that is, contractual liabilities in future years—has provided policymakers with early warning against the bunching of repayments, so that corrective steps could be taken in advance. Also, the computerized database has facilitated the evaluation of the impact of alternative borrowing strategies. Effective monitoring through computerization, therefore, has become essential to India's debt management.

### Benefits of a good information system

**14.82** The benefits of a good debt information system are outlined here, drawing on India's experience.

<sup>13</sup>Prepared by the Ministry of Finance of India.

Table 14.4. India's External Debt and Key Debt Indicators

	As at March 31							
	1991	1992	1995	1996	1997	1998	1999	2000 <sup>1</sup>
	<i>(Billions of U.S. dollars, end-period)</i>							
(1) Long-term debt	75.3	78.2	94.7	88.7	86.7	88.5	93.3	94.4
(2) Short-term debt	8.5	7.1	4.3	5.0	6.7	5.0	4.4	4.0
(3) Total external debt	83.8	85.3	99.0	93.7	93.5	93.5	97.7	98.4
	<i>(Ratios, in percent)</i>							
(4) Ratio of external debt to GDP	30.4	41.0	30.9	27.1	24.7	24.4	23.5	22.0
(5) Ratio of debt service to current receipts	35.3	30.2	25.9	26.2	23.0	19.5	19.0	16.0
(6) Ratio of short-term debt to total debt	10.2	8.3	4.3	5.4	7.2	5.4	4.5	4.1
(7) Ratio of short-term debt to foreign exchange reserves	382.1	125.6	20.5	29.5	30.1	19.4	14.9	10.6

<sup>1</sup>Provisional.

### External debt management

**14.83** One of the salient features of external debt management in India has been an annual cap or ceiling on External Commercial Borrowings (EComBs). EComBs are defined to include commercial bank loans, export credits, and bonds issued in the international capital markets. The borrowers are public sector, financial institutions, and private sector entities. As a sovereign entity the Government of India does not borrow in the international capital markets.

**14.84** Every year a cap is fixed on EComB approvals, which takes into consideration the commercial borrowing requirement of different sectors of the economy, and medium-term balance of payment projections. The end-objective is to keep the debt-service ratio within the prudent limits of debt management. The exercise is undertaken with the help of computerized scenario building, the inputs for which are (1) projected debt-service payments on disbursed outstanding debt; (2) disbursements of debt "in the pipeline" and the projected debt service; (3) future EComB approvals and their impact on inflows and debt service based on an assessment of the international capital market situation.

### Sovereign external debt management

**14.85** India does not access international capital markets as a sovereign entity. But the need for sovereign external debt management has arisen because the World Bank now requires borrowers to make their own decisions regarding choice of cur-

rency, interest, and maturity mix on Bank borrowings. Some other multilateral institutions are also considering a similar approach. Also, with the World Bank soon to offer free-standing hedging products (derivatives products), such as interest and currency swap, interest rate caps, collars, etc., active management of sovereign external debt will become necessary.

**14.86** To meet the new circumstances, India is developing a modeling exercise for sovereign external debt. The objective is to develop benchmarks that lead to an optimal currency, interest, and maturity mix of sovereign external debt so as to minimize the costs of government borrowings for any given level of risk. These benchmarks would be a guide for future borrowing and active debt-management decisions. Since the debt data for the government account are 100 percent computerized, historical data can be retrieved, and projections of future payments made readily available, for analysis and scenario-building exercises.

**14.87** A separate exercise is also under way to consider the prepayment of World Bank fixed-rate loans, which have interest rates significantly above prevailing market rates.

### Contingent liabilities

**14.88** The Government of India has provided guarantees on a selective basis for borrowings from abroad by public sector enterprises, developmental financial institutions, and, in some instances, private sector companies. By maintaining records of such

**Table 14.5. India's Central Government Guarantees on External Debt**

	March 31						December 31
	1994	1995	1996	1997	1998	1999 <sup>1</sup>	1999 <sup>1</sup>
	<i>(Billions of U.S. dollars, end-period)</i>						
(1) Government debt	55.9	59.5	53.1	49.1	46.5	46.1	46.9
(2) Nongovernment debt	36.8	39.5	40.7	44.4	47.0	51.5	52.1
(3) <i>Of which</i> with government guarantee (a) + (b) + (c) <sup>2</sup>	12.2	12.3	10.2	8.2	7.3	7.1	7.5
(a) Financial sector	3.3	3.3	2.7	2.3	2.3	2.4	2.6
(b) Public sector	8.6	8.7	7.1	5.6	4.6	4.3	4.6
(c) Private sector	0.3	0.4	0.4	0.4	0.3	0.3	0.3
(4) Total external debt (1) + (2)	92.7	99.0	93.7	93.5	93.5	97.7	99.0
(5) Government debt and guaranteed debt (1) + (3)	68.1	71.8	63.2	57.3	53.8	53.2	54.4
	<i>(Ratios, in percent)</i>						
(6) Ratio of government debt and guaranteed debt to total external debt (5)/(4)	73.5	72.5	67.4	61.3	57.5	54.5	55.0
(7) Ratio of government guaranteed debt to nongovernment debt (3)/(2)	33.1	31.2	25.0	18.5	15.5	13.7	14.4

<sup>1</sup>Provisional.<sup>2</sup>Direct guarantees on external debt provided by the central government.

explicit contingent liabilities in the computer system along with external debt data, these liabilities are regularly monitored. Because the government is now discouraging the issue of fresh guarantees, except where considered absolutely necessary (such as for certain infrastructure projects), total outstanding guarantees are on a declining trend—the share of government guaranteed debt in total nongovernment debt declined from 33.1 percent at end-March 1994 to 14.4 percent at end-December 1999. Table 14.5 provides these data and a disaggregation of guarantees by institutional sector (financial, public, and private).

#### *Computerization and networking*

**14.89** Nearly 80 percent of external debt data is computerized using the Commonwealth Secretariat's Debt Recording and Management System (CS-DRMS).<sup>14</sup> The adoption of the CS-DRMS system, in the late 1980s, was a major step forward, marking the beginning of the use of external debt data as a management information system input for debt-management decisions. Efforts are now under way to extend the scope of computerization to the remaining data, which are currently captured on a manual reporting basis.

<sup>14</sup>The CS-DRMS is described in Chapter 18.

#### **Interagency involvement**

**14.90** The main agencies involved in the compilation of external debt data are the Ministry of Finance, the Reserve Bank of India, and the Ministry of Defense. The computerized database containing data reported by all the different agencies is housed in a central server in the External Debt Management Unit (EDMU) in the Ministry of Finance. The information from the centralized database is then available for analysis and scenario-building exercises. Through Local Area Network, the database is also accessible to various users in the Ministry of Finance as an input for policy decisions.

**14.91** External debt data are updated on a quarterly basis. The dissemination policy is that of full transparency of reporting, with statistics published in the *Economic Survey* of the Ministry of Finance and the *Annual Report* of the Reserve Bank of India. In addition, since 1993 the Ministry of Finance has published an annual *Status Report on External Debt*, which is circulated in the Parliament of India. This report, which provides an exhaustive analysis of external debt data, has helped raise public awareness of external debt issues.

**14.92** Such transparency and awareness also leads to public feedback, which acts as an early warning system, especially in situations where key debt indi-

cators are beginning to move in the wrong direction. The transparency and comprehensive monitoring also ensures that no component of debt is unreported. This, together with low levels of short-term debt, contributed to India's success in withstanding the effects of the financial crises of 1997/98.

**14.93** Senior staff in the key government agencies undertake periodic reviews of the measurement of external debt to ensure best practice and continuous improvement in the quality and coverage of data. In 1992, the Task Force/Policy Group Report on External Debt Statistics recommended adoption of internationally accepted classifications and definitions, and stressed the need for transparency of data, unusual at the time for an emerging economy. On the report's recommendation, the EDMU was set up in the Ministry of Finance to coordinate debt-monitoring activities, and provides data inputs for debt-management decisions. A World Bank Institutional Development Fund (IDF) grant of \$0.475 million played a key role in providing funding support for the various debt-monitoring and management activities undertaken by the EDMU. The Report of the Technical Group on External Debt, which came out in 1998, took into consideration the changing international requirements for debt data monitoring and reporting.

**14.94** There are ongoing efforts to further improve the quality of data and increase the scope of computerization. Thus, for example, given the significance of short-term debt for overall external debt management, a Study Group has been created to look into ways of ensuring its more effective monitoring and coverage. The group is expected to suggest that a computerized short-term debt database be created that is amenable to analysis and scenario exercises. Given the volatility of short-term debt flows and the possibility of their nonrenewal in times of crisis, such flows are already strictly monitored and permitted only for trade-related purposes. Another Study Group has been created to look into ways of ensuring more effective monitoring and computerization of nonresident Indian deposits data (see the next section). Further, since external debt flows are to be seen in the overall balance of payments context, other balance of payments components become important and can have a bearing on external debt flows. A separate Study Group, therefore, has been set up for streamlining monitoring and computerization of nondebt flows.

**14.95** Efforts are also under way to make India a "resource center" and a "center of excellence" for external debt-management activities so that Indian experience and expertise can be shared with other countries, and learning opportunities broadened.

### **Monitoring and Management of Nonresident Deposits in India<sup>15</sup>**

**14.96** In the 1970s, the growth of the current account deficit prompted India to explore alternatives to the traditional source of external finance: concessional borrowing. This led to borrowing from commercial sources, and the introduction of special deposit schemes for nonresident Indians (NRIs). Different NRI deposit schemes were developed in order to meet the various asset preferences of NRIs. This section describes the features of these schemes, the method of data collection, information on their evolution during the 1990s, and some lessons from the Indian experience.

#### **Nonresident deposit schemes**

**14.97** Essentially there are two types of nonresident deposit schemes: domestic-currency-denominated deposits and foreign-currency-denominated deposits. The first nonresident deposit scheme, introduced in February 1970, was a domestic currency account called the Non-Resident External Rupee Account [NR(E)RA]. Under this scheme, both principal and interest could be repatriated without any restriction, while the exchange risks were borne by the depositors. The rates of interest were initially set by the Reserve Bank of India (RBI) but were fully freed from official control by September 1997. The first foreign-currency-denominated scheme was introduced in November 1975 and was entitled the Foreign Currency Non-Resident (Account) [FCNR(A)]. This account was repatriable, with interest rates fixed by the RBI, taking into account movements in international interest rates. Although the deposit liabilities were held by the commercial banks, the exchange risk was borne by the RBI, and implemented through a mechanism of purchases and sales of foreign currency at notional exchange rates by the RBI from the banks. This scheme was withdrawn with effect from August 1994 in view of its

<sup>15</sup>Prepared in the Division of International Finance, Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai.

quasi-fiscal costs and implications for the central bank's balance sheet.

**14.98** Subsequently, additional schemes have been introduced, and discontinued, as circumstances have warranted. In particular, nonrepatriable deposit schemes were introduced in the early 1990s. At the time of writing, the latest in the series of non-resident rupee accounts is the Non-Resident Special Rupee Account [NR(S)RA] introduced in April 1999, and, among foreign currency accounts, the Foreign Currency Non-Resident (Bank) [FCNR(B)] scheme. The exchange risk for the latter is managed by the commercial banks and not the RBI. Furthermore, a large proportion of FCNR(B) deposits—for instance, over 90 percent at end-March 2000—are matched by foreign currency assets, which facilitates asset-liability management by accepting banks.

**14.99** Also, there has occasionally been issuance of bonds by the State Bank of India, a commercial bank, aimed at nonresidents. Furthermore, nonresident Indians and Overseas Corporate Bodies can channel funds into India through direct investment, the nonresident ordinary deposit (NRO) scheme, private remittances, and a special scheme for returning citizens to import gold and silver.

#### *Monitoring*

**14.100** As a part of overall financial sector management, the RBI monitors total NRI deposits, both stocks and flows, and adjusts its policies relating to these deposits as warranted by the domestic and international circumstances. Banks are required to report the necessary information on NRI deposits through various regular statements and returns provided to the RBI, including a fortnightly return. The reports are specifically designed to capture the stock and flow data on the various NRI deposits. Further, a study group financed from the IDF of the World Bank is reviewing the reporting arrangements for NRI deposits.

**14.101** NRI deposits data come from a large number of branches of commercial banks at widely spread places across India, and many of these branches do not have enough communication infrastructure to submit data in electronic form. These limitations may not be serious since the flow data in respect of such branch offices do not vary significantly over short periods of time. In fact, it was estimated that about 500 large branches of commercial banks in India

accounted for over 85 percent of the overall foreign exchange business, including NRI deposits. The deficiency of coverage could, however, be addressed by remote branches reporting data to their regional or zonal offices, which, in turn, could transmit the consolidated information in electronic form to the RBI through their Head Offices. This new reporting system would provide the stock position of NRI deposits disaggregated by account type, by country of creditor, by maturity (both remaining and original) and by type of currency at the end of every quarter for principal, and, separately, interest costs that have accrued.

#### *Evolution*

**14.102** Table 14.6 provides information on the evolution of various nonresident deposit accounts during the 1990s. The outstanding balances under NRI deposits have increased from \$14 billion at end-March 1991 to \$23 billion at end-March 2000. NRI deposits as a percentage of India's external debt remained broadly unchanged over the decade. There was a marked shift in the composition of NRI deposits from foreign currency deposits (about 74 percent of the total in 1991 to about 40 percent in 2000) to domestic-currency-denominated deposits (from about 26 percent in 1991 to 60 percent in 2000), with a significant decline in short-term deposits. Indeed, foreign-currency-denominated deposits actually fell over the decade. This shift occurred as the government decided to stop providing exchange rate guarantees on foreign currency deposits, as losses emerged; and to deregulate interest rates—previously interest rates on these deposits were held at levels significantly above interest rates prevailing in international markets. Also, while not shown in the table, nonrepatriable rupee deposits have been increasing, to over 30 percent of the total NRI deposits as at end-March 2000. Of the total repatriable NRI deposits, the proportion of short-term repatriable deposits declined from around 27 percent at end-March 1991 to about 9 percent at end-March 2000.

#### *Lessons from the Indian experience*

**14.103** A number of lessons emanate from the Indian experience with nonresident deposit schemes.

**14.104** First, for policy purposes, good information is required. In particular, as a part of external debt management, there needs to be careful monitoring of the currency portfolio, especially in terms of currency denomination of deposits, and of the maturity

**Table 14.6. Indicators of Nonresident Deposits in India***(Millions of U.S. dollars)*

Items	As at end-March					
	1991	1993	1995	1997	1999	2000
FCNR(A) <sup>1</sup>	10,103	10,617	7,051	2,306	0	0
FCNR(B) <sup>2</sup>	0	0	3,063	7,496	8,323	9,069
FC(B&O)D <sup>3</sup>	265	1,037	0	0	0	0
FCON <sup>4</sup>	0	0	10	4	0	0
NR(E)RA <sup>5</sup>	3,618	2,740	4,556	4,983	6,220	6,992
NR(NR)RD <sup>6</sup>	0	621	2,486	5,604	6,758	7,037
NR(S)RA <sup>7</sup>	0	0	0	0	0	0
<b>Total NRI deposits</b>	<b>13,986</b>	<b>15,015</b>	<b>17,166</b>	<b>20,393</b>	<b>21,301</b>	<b>23,098</b>
Domestic-currency-denominated NRI deposits (Percent of total NRI deposits)	3,618 (25.9)	3,361 (22.4)	7,042 (41.0)	10,587 (51.9)	12,978 (60.9)	14,029 (60.7)
Foreign-currency-denominated NRI deposits (Percent of total NRI deposits)	10,368 (74.1)	11,654 (77.6)	10,124 (59.0)	9,806 (48.1)	8,323 (39.1)	9,069 (39.3)
Total external debt <sup>8</sup>	83,801	90,023	99,008	93,470	97,666	98,435
Long-term	75,257	83,683	94,739	86,744	93,279	94,392
Short-term	8,544	6,340	4,269	6,726	4,387	4,043
Proportion of NRI deposits in India's external debt <sup>9</sup>	16.7%	16.0%	14.8%	15.8%	14.9%	16.3%
Proportion of long-term NRI deposits in long-term external debt <sup>9</sup>	13.6%	13.2%	13.1%	12.7%	12.6%	15.4%
Proportion of short-term NRI deposits in short-term external debt	43.8%	53.3%	53.4%	56.1%	50.1%	36.6%
Proportion of long-term repatriable NRI deposits in total repatriable NRI deposits	73.2%	76.7%	84.5%	74.5%	84.9%	90.8%
Proportion of short-term repatriable NRI deposits in total repatriable NRI deposits	26.8%	23.3%	15.5%	25.5%	15.1%	9.2%

Note: This table does not include amounts mobilized from nonresident Indians through issuance of bonds from time to time.

<sup>1</sup>Foreign Currency Non-Repatriable (Account) [FCNR(A)] was withdrawn effective August 1994.

<sup>2</sup>Foreign Currency Non-Resident (Banks) [FCNR(B)] was introduced in May 1993.

<sup>3</sup>Foreign Currency (Banks and Others) Deposits [FC(B&O)D] were withdrawn with effect from July 1993.

<sup>4</sup>Foreign Currency (Ordinary Non-Repatriable) Deposit Scheme [FCON] was withdrawn from August 1994.

<sup>5</sup>Non-Resident (External) Rupee Account [NR(E)RA] was introduced in February 1970.

<sup>6</sup>Non-Resident (Non-Repatriable) Rupee Deposits [NR(NR)RD] was introduced in June 1992.

<sup>7</sup>Non-Resident Special Rupee Account [NR(S)RA] was introduced in April 1999.

<sup>8</sup>Repatriable nonresident deposits (both foreign-currency- and domestic-currency-denominated—such as FCNR(A), FCNR(B), NR(E)RA and FC(B&O)D) form part of India's external debt.

<sup>9</sup>Excludes NR(NR)RD accounts, which are not repatriable and so are not included in external debt.

profile, both in terms of original and remaining maturity. The latter data help to identify any bunching of payments, and so it is useful to program the debt-recording software systems to generate data on a remaining-maturity basis.

**14.105** Second, from a policy viewpoint, the central bank or the government should refrain from providing exchange guarantee to the depositors, since such guarantees take the form of contingent external liabilities and could pose a systemic threat when reserves are low and exchange rates depreciate very sharply. The focus should be on domestic currency deposits of longer maturity. A steady repayment schedule is preferred because this enables the com-

mercial banks to reduce the potential for serious asset-liability mismatches that may arise.

**14.106** Third, when devising these schemes, interest rates on the deposits should be aligned with domestic and international rates, so as to ensure that deposits are attracted while remaining cost effective. Also, an assessment of the degree of substitution between NRI deposits and normal flows from non-residents in the form of private transfers, workers' remittances, and other non-debt-creating flows from NRIs is required.

**14.107** Finally, following the residence criterion, all nonresident deposits should be part of external debt.

However, India does not include nonresident non-repatriable deposits in its external debt statistics because the principal is not repatriable and hence no external liabilities arise, and the funds stay within the Indian economy.

## Israel

### Measurement of External Debt<sup>16</sup>

**14.108** The Bank of Israel's Foreign Exchange Activity Department (FEAD) measures Israel's external debt position, using detailed loan-by-loan data provided by the Israeli Government and the nonbank private sector. Reported balance sheet data are used to compile external debt data of banks. The external debt data are published quarterly and, along with external assets owned by Israeli residents, are included in the Israeli IIP statement. This case study describes the loan-by-loan system used by the FEAD and the output it generates.

### Reporting of loan-by-loan data

**14.109** Most of the external debt data of the public sector are obtained, on a regular basis, from the Ministry of Finance. These data cover all loans that the government receives from creditors abroad, including government bond issues in international markets. The nonbank private sector (a private individual or a firm) must report within 15 days of receipt any loans received from abroad that have a value equivalent to \$100,000 or more. These data cover all loans that firms and individuals receive from creditors abroad, including Israeli companies' issues of bonds in international markets and ownership loans received.

**14.110** The following details of each loan are reported (see Figure 14.1) and entered into the FEAD's system:

- *Primary details*: Loan receipt date, amount, and currency;
- *Borrower*: Name and borrower type (such as government, central bank, firm, or individual);
- *Lender*: Name, country of residence, and lender type (such as foreign bank, branch of Israeli bank abroad, foreign government, IMF, World Bank, issue of tradable bonds, foreign firm, individual foreign resident, or ownership loan);

- *Interest rate type*: Fixed or variable rate;
- *Interest rate (percent)*: Fixed rate or spread above variable rate;
- *Principal payment schedule*: Includes final payment date; and
- *Interest payment schedule*.

**14.111** Also, during the entry of these details into the database the following additional fields are automatically calculated:

- *Credit term* (months): Defined as the number of months from the date of receipt of the loan until final repayment; this field can be used to attribute the debt by loan term: short-term debt, medium-term debt, and long-term debt;
- *Grace* (months): the number of months between the date of receipt of the loan and the first repayment of the principal;
- *Calculated interest* (on loan receipt date): For fixed-rate loans, this is the interest rate figure itself; for variable-rate loans, this is equal to the value of the variable rate base plus the spread above it; and
- *Spread above LIBOR* (on loan receipt date): For fixed-rate loans, this is the calculated spread above LIBOR (London interbank offered rate).

### Aggregate data compiled<sup>17</sup>

**14.112** In addition to calculated aggregated loan and bond figures, and commercial bank balance-sheet data, the FEAD maintains aggregate external debt data on nonresidents' ownership of domestically issued bonds, and on the balance of suppliers' credit received by Israeli importers (and extended by Israeli exporters), based on an FEAD quarterly survey of companies involved in foreign trade. The same system contains figures on external assets owned by residents, including equities, bonds, loans, deposits, and direct investment (ownership loans).

**14.113** Data quality checks are undertaken at the individual loan level and also by comparing the loan-by-loan data with information on transactions, which are drawn mainly from bank reports, and with the balance-sheet data of large companies. The database covers all public and banking sector loans and over 90 percent of the nonbank private sector loans.

<sup>16</sup>Prepared by the Bank of Israel.

<sup>17</sup>Apart from debt-related data, the same system contains data on nonresident portfolio investment in Israeli equities and direct investment of nonresidents in Israel.

**Figure 14.1. Israel: Report Form on Loans Received by Local Residents from Foreign Residents<sup>1</sup>**

**1. Loan details**

New loan   
  Loan particulars update   
  Early redemption   
  Loan renewal  
 Sum \_\_\_\_\_ Currency \_\_\_\_\_ Currency Code\* \_\_\_\_\_ Receipt Date \_\_\_\_\_

**2. Borrower details (local resident)**

Borrower identifying number (identity card/corp. reg. no.) \_\_\_\_\_ Borrower name \_\_\_\_\_ Economic branch \_\_\_\_\_ Economic branch code\* \_\_\_\_\_

**3. Lender details (foreign resident)**

Lender name \_\_\_\_\_ Lender type \_\_\_\_\_ Lender code\* \_\_\_\_\_ Lender country \_\_\_\_\_ Country code\* \_\_\_\_\_

**4. Principal payment schedule**

**1. Regular payments**

First payment date	No. of payments	Frequency (months)	Final payment date
_____	_____	_____	_____

**2. Irregular payments**

Sum	Date
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Additional payments - write below (comments)

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**5. Interest rate details**

Interest rate type: \_\_\_\_\_ Interest rate (%) \_\_\_\_\_

Fixed  
 LIBOR ("interest rate" is spread above LIBOR)  
 Interest free  
 Other \_\_\_\_\_

**6. Interest payment schedule**

**1** Interest payment schedule coincides with principal payment schedule.

**2** Regular payments (equidistant payment dates)

First payment date	No. of payments	Frequency (months)
_____	_____	_____

**3** Interest sum discounted in advance:

Sum \_\_\_\_\_

**4** Irregular payments:

Dates	
1 _____	4 _____
2 _____	5 _____
3 _____	6 _____

**7. Details of loan reporter**

Name	Signature	Date	Telephone no.	Address
_____	_____	_____	_____	_____

\*To be filled out if loan form is handled by an Israeli commercial bank.

Bank code*	Branch code*	Loan number (for BOI use)
_____	_____	_____

<sup>1</sup>Reporting requirement is that of the local resident—an individual or a corporation—receiving a loan of at least \$100,000; with the report to be submitted within 15 days of loan receipt.

## Output

**14.114** From the information held on the database, the Bank of Israel publishes quarterly tables on the external debt, in U.S. dollar terms. For the public, nonbank private, and banking sectors, and by source of external debt, data are presented on the stock of outstanding external debt; the original term to maturity; the principal currency composition; and external debt receipts and principal payments. Also provided is information by sector on net debt—that is, gross debt liabilities less ownership of foreign debt liabilities by Israeli residents—and principal and interest repayment schedules.

## Mexico

### Registration of Private Debt<sup>18</sup>

**14.115** The Mexican system of measuring private sector external debt has developed over the past two decades. Beginning with external debt difficulties of the early 1980s, the system has evolved as exchange controls have been repealed and economic conditions have changed. This case study explains that evolution, and sets out the present situation.

**14.116** On August 5, 1982, Mexico declared a moratorium on principal payments on external debt. On September 1, 1982, across-the-board exchange controls were instituted and replaced three months later by a simple exchange control system, whereby two foreign exchange markets would operate simultaneously: one subject to control and the other not.

### Data collection methods in the era of exchange controls

**14.117** At the time of the introduction of exchange controls in 1982, the Mexican government had no official data on the amount of private sector external debt outstanding. So there was a need to develop a debt-registration system, whose main purpose was to facilitate exchange control operations. In the payments moratorium notice of August 5, 1982, and subsequently in the exchange control decree published on December 13, 1982, those private enterprises requesting foreign exchange to service their

debts were required to register their financing with the Secretaría de Hacienda y Crédito Público (Secretariat of Finance and Public Credit—SHCP). A special unit within the SHCP was set up to start monitoring private external debt, and this unit created a Register of Loans Payable in Foreign Exchange to Financial Institutions Abroad (the Register), and introduced a report form called the *Constancia de Registro* (Record of Registration) to collect the data. This report form needed to be completed for a private enterprise to receive authorization to obtain foreign exchange from national banks.

**14.118** The report form identified the main contractual features of foreign exchange borrowing by private sector enterprises from foreign financial institutions. It covered the type of financing, the existing loan balance, the method of payment, and the payment schedule listing each outstanding payment with due date, and principal and interest amounts. When the registration requirement was introduced, all the enterprises quickly came forward to register their external debt because they could not otherwise obtain foreign exchange to service their debts.

**14.119** In addition to the loans registered in the SHCP, a register of debt to nonbank foreign suppliers was created in October 1982 in the Secretariat of Trade and Industrial Development (SECOFI), with the same purpose as the register of foreign currency loans. In other words, the record of registration provided information on debt service to the authorities, and was a requirement for residents if they needed to obtain foreign currency from national banks. This register was closed in January 1983, and the outstanding balances were refinanced by suppliers under a long-term scheme.

**14.120** Also, in 1983, the central bank set up a fund through which private sector debtors could repay foreign creditors. This helped to improve the registration of private sector debt. This fund was part of the program known as FICORCA (Trusteeship Coverage of Exchange Risk), and existed from April to October 1983. This program required private sector enterprises to restructure their foreign debts—for instance, into maturities of eight years with four years' grace, or six years with three years' grace. If the enterprise made the payments in local currency, FICORCA would pay principal and interest in foreign currency to the account of the enterprise, so that

<sup>18</sup>Prepared by the Department of Public Credit, Mexico.

the enterprise could service its restructured debts to foreign banks. A similar program was reintroduced for a short period in 1987 and 1988 and was known as the FICORCA Facility Agreement.

**14.121** Once private enterprises regained access to external financing, in 1984, they were required to register new debt with the SHCP. Indeed, the authorities decided that, in order to continue to have access to foreign exchange, private enterprises would be required not only to report new debt at the time of creation, but also to report twice a year on their outstanding debt. This continued until 1991. So, twice a year the authorities made public announcements to all private sector enterprises and published in the most widely distributed major newspapers in the country the registration numbers of loans to report between January 1 and March 31 and between July 1 and September 30 of each year. Enterprises were required to provide the authorized documentation for the original borrowing and the subsequent debt servicing.

**14.122** In addition to the loans registered in the SHCP, a register of debt to nonbank suppliers was created in SECOFI. Thus, in October 1982, the register of amounts owed to foreign suppliers was set up with the same purpose as the register of foreign currency loans. In other words, the record of registration provided information on debt service, and permitted the purchase of foreign currency from national banks by the debtors. This register was closed in January 1983, and the outstanding balances were refinanced by suppliers under a long-term scheme.

**14.123** Outstanding amounts payable by the Mexican banking system, nationalized in September 1982, were never subject to registration. The central bank only required completion of a survey form that is still used, showing the position of the banks' accounts but not future payments.

#### **Data collection methods following the repeal of exchange controls**

**14.124** An official Exchange Control Decree repealed exchange controls on November 10, 1991, since there was no longer any reason to maintain the two-tiered foreign exchange market at the controlled and market rates as established. Also, the Register of Foreign Currency Loans Payable Abroad to Financial Institutions and the *Constancia de Registro* were abolished. Indeed, since the termination of the exchange

control regime, private enterprises are no longer legally required to report the status of their external liabilities to the SHCP. However, the SHCP has found it necessary to continue to monitor and publish data on private sector external debt. This required the reestablishment of a means of collecting data that covered the main features of borrowing by private sector enterprises from foreign financial institutions.

**14.125** Initially after the repeal of exchange controls, data were collected periodically through survey questionnaires sent to the major enterprises having a representative level of indebtedness relative to total private external debt. With the cooperation of some 100 indebted industrial groups, a database was designed for processing the data collected. This was used to draw up a statistical bulletin on private sector external debt and included a number of statistical tables that gave a clear picture of the level of external indebtedness. The level of participation by debtors was initially excellent.

**14.126** However, following another crisis in the mid-1990s, it was once again necessary to implement a system whereby private enterprises provided information on an ongoing as opposed to periodic basis. An official request, similar to the public announcements mentioned above, was prepared requiring the private enterprises to report estimates of principal payments both on recent borrowing and on earlier outstanding amounts. In addition, data began to be sourced from the Mexican Stock Market (BMV) to complement the private external debt statistics; the BMV releases a quarterly financial report on borrowing by industrial corporations.

**14.127** Most recently, the system has evolved such that data on private sector external debt are collected from a number of sources so as to ensure that the data published are reliable, are collected expeditiously, and are informative.

**14.128** The principal source of information is now the BMV, which collects data quarterly on Mexican corporate liabilities. The BMV report form includes a breakdown of external debt by type of credit, using the following classification system: commercial banks, bonds, and foreign trade credit. The report form also provides the name of the creditor, the amount of the financing, currency of issuance, the borrowing date, the maturity date, and the estimated payments over the next four years, including the out-

standing balances, the repayment schedule for the coming four years, and a classification by loan type.

**14.129** Other external data sources include foreign-owned credit rating agencies, such as Duff and Phelps, Moody's, and Standard & Poor's. The publications of these agencies include information on debt they rate, which SHCP consults. Also, the debt unit frequently checks with the Undersecretariat of the SHCP for the information submitted by private enterprises when they withhold tax payments on interest payable abroad.

**14.130** With this information, the SHCP reviews each credit and cross-checks the different sources, so as not to duplicate information.

**14.131** Enterprises that are not listed on the BMV, have no debt ratings, and file no tax returns are requested to cooperate by completing a survey questionnaire, providing information to the SHCP on all the characteristics of their liabilities, updating the information on balances on a quarterly frequency.

**14.132** All the information collected is maintained in a database, which is carefully checked to ensure that the debt of enterprises is not entered more than once, so as to avoid duplicate reports. From this database, a number of outputs can be generated, including the level of indebtedness and debt classification by enterprise, creditor, currency, and maturity.

#### Verification of figures

**14.133** When exchange controls were established and after having registered the debt of most industrial groups, reports were produced from the database classifying the debt by creditor and with the details of each financing. This information was cross-checked with data from the major foreign creditor banks through their representative offices in Mexico. The overall balances by creditor bank were verified with the unit that received the report form from the creditor bank. This type of verification is not undertaken today, since it is mandatory for creditor banks to report to the central bank under the rules authorizing them to grant loans to Mexico. The report now covers both public sector and private sector external debt. Efforts are currently being made to have the form include information not only on the balances outstanding as traditionally reported, but also on the payment schedule for the outstanding

debt, by quarter for the first year and annually for the following three years.<sup>19</sup>

#### Dissemination

**14.134** The statistical data on Mexico's total external debt, including private debt, are published in the statistical tables in *Mexico Economic and Financial Statistics—Data Book*, a biannual document published by the SHCP and distributed to foreign banks in the SHCP's quarterly review entitled *Estadísticas oportunas de finanzas públicas y deuda pública* (Timely Public Finance and Public Debt Statistics), published through the Directorate General of Financial Planning. The data also appear in the quarterly presentation on the Internet via the SHCP's webpage.

**14.135** Information on private sector debt is presented for the commercial banks and the nonbank private sector, and the sources of finance are provided—commercial banks, and other liabilities for commercial bank debtors; and capital markets, commercial banks, and external trade-related debt for nonbank private sector debtors. An annual amortization schedule for the nonbank private sector external debt for the remaining portion of the current year, and the following three years, is provided.

## New Zealand

### Experience in Collecting Foreign Currency Hedging Information<sup>20</sup>

**14.136** In 1998, major users of external debt statistics in New Zealand were concerned that by not taking account of hedging activity, New Zealand's published external debt statistics were overstating the extent of the economy's exposure to currency movements. As a consequence, in June 1999, Statistics New Zealand (SNZ) first published indicative information about the hedging of New Zealand's external debt denominated in foreign currency—for March 31, 1998 and 1999—alongside, and as a sup-

<sup>19</sup>While the compilation of these creditor bank data is the exclusive responsibility of the central bank, the obligation to report to the authorities and the public on the performance of external private debt is the responsibility of the Finance Secretariat. Also, the Finance Secretariat is responsible for establishing the guidelines for authorization of the operations of foreign financial institutions in Mexico, and, in conjunction with the central bank, it verifies the activity of foreign banks.

<sup>20</sup>Prepared by Statistics New Zealand.

plement to, New Zealand's Overseas Debt statistics.<sup>21</sup> These supplementary data—disaggregated by currency and into two institutional sectors—provided estimates of the extent of hedging of New Zealand's foreign currency external debt using financial derivatives contracts and natural hedges. The data also provided estimates of unhedged external debt. In addition, net market value estimates of the financial derivatives contracts were published, also with a sectoral breakdown. SNZ has continued to publish supplementary hedging information annually. This case study sets out the experience of SNZ in setting up and operating the survey in its early years, and the lessons learned.

**14.137** In the presentation of external debt statistics, foreign-currency-denominated external debt is converted into New Zealand dollars at the exchange rate prevailing at the survey date (March 31). Given this methodology, and with external debt denominated in foreign currencies accounting for about half of New Zealand's gross external debt at the time, the depreciation of the New Zealand dollar between March 31, 1997 and 1998 was estimated to have accounted for 38 percent of the increase in the value of New Zealand's external debt between those two dates. Anticipating significant user interest when the March 1998 external debt statistics data were published, the SNZ gave prominence to this estimate and to the compilation methodology used. Nevertheless, some major users of the statistics questioned their relevance, believing that the total external debt statistics overstated the true external exposure of the economy, because a significant portion of the debt was probably hedged against exchange rate movements.

### The project

**14.138** With the collection and publication of statistics on New Zealand's net asset and liability positions in financial derivatives not due until 2001, in 1998 the SNZ felt an immediate need for hedging information that would place the published external debt statistics into a risk-management context. Consequently, the SNZ undertook a project to collect data on:

- The extent of the foreign currency hedging of New Zealand's overseas debt; and
- Estimates of the net market value of the financial derivatives contracts.

**14.139** Data were to be collected from those resident enterprises that accounted for approximately 80 percent of external debt denominated in foreign currencies. In view of the limited coverage of the hedging supplement, the results were intended to be indicative estimates.

**14.140** The project began in October 1998, with the intention of collecting retrospective data as at March 31, 1998, by December 31, 1998. Thereafter, a decision would be made about whether to proceed with a further collection of data as at March 31, 1999. It was expected that the need for the hedging supplement would cease once the project to implement *BPM5* in full was completed, in 2001.

**14.141** The project was undertaken by the staff of the Balance of Payments Division (BOP staff) of the SNZ. An essential feature of the early stages of the project was the close consultation between the BOP staff and Reserve Bank of New Zealand (RBNZ) staff, and, separately, a private sector bank with which the BOP staff had had previous discussions on the impact of financial derivatives on balance of payments statistics. The RBNZ offered advice and consultation on several occasions during the course of the project. The private sector bank offered advice from the perspectives of a user of the published statistics, and the perspective of being a market participant and data supplier. The cooperation and advice received from both these organizations was invaluable to the success of the project.

**14.142** Initial development work within SNZ included determining an initial set of data requirements and identifying the enterprises to be surveyed from the population of the Total Overseas Debt survey. In the event, 20 enterprises (plus the official sector) were selected, of which all except one reported the data for the 1998 survey. While one further enterprise was unable to supply data for the 1999 and 2000 surveys, nevertheless the effective sample of the hedging supplement encompassed 75 to 81 percent of total foreign-currency-denominated external debt in the 1998, 1999, and 2000 surveys. While these enterprises were at first expected to be mostly banks, in fact nine of the enterprises selected

<sup>21</sup>"Overseas debt" is the term used for the SNZ survey that collects data on New Zealand's external debt, and the published statistics. The survey measures New Zealand's total overseas debt as at March 31 each year, and collects data from both private and government sector organizations.

were nonbank corporates. For the purposes of the survey, a two-sector classification was used: banks, and the “corporate and official” sector.

### Consultations

**14.143** The initial set of data requirements was discussed with the private sector bank, and separately with the RBNZ. This first round of consultations identified:

- The need for a short-term/long-term split based on original maturity, since some respondents were expected to find the reporting of hedges for short-term instruments too difficult due to daily refinancing (“rollover”) and pricing;
- The need to split the data request into “hedging by financial derivatives contract” and “natural hedge”;
- The need to ask respondents to report their hedging with both residents and nonresidents; by asking respondents to report all their positions, the likelihood of double counting would be reduced.

**14.144** Following the amendments to the draft hedging supplement questionnaire, a second round of consultation was undertaken—an essential aspect of the project. This consultation comprised personal visits by BOP staff to ten of the enterprises selected to be surveyed, involved a discussion of the objectives of the questionnaire and its reporting requirements, and allowed BOP staff to hear the views of the respondents. Those respondents not visited personally were contacted by telephone, and a copy of the draft questionnaire sent for comment; in nearly all these cases feedback on the questionnaire was received. SNZ staff encountered a high level of cooperation among virtually all of the respondents visited or contacted, certainly once the objectives of the hedging supplement were explained.

**14.145** A clear message arising from the consultations, which were reviewed with the RBNZ, was the need to customize the questionnaire, both in terms of the sector of the respondent and each individual respondent within each sector. For the nonbank corporates, it was decided to differentiate the “natural hedge” question into “hedging by balance sheet assets,” and “hedging by other means—for example, expected foreign exchange receipts from exports.” This made the scope of the inquiry clearer to respondents and enhanced the usefulness of the results for risk analysis purposes by separating hedges that take the form of balance-sheet assets from those that do

not. The process for the collection of retrospective data for March 31, 1998 was too far advanced for this distinction to be included in that survey, but it was incorporated into the 1999 survey.

**14.146** Other features of particular interest emerging from the second round of consultations were as follows:

- Whatever the term of the underlying liability, associated derivatives contracts are often of a shorter term and rolled over (or renegotiated) through the life of the underlying liability. The effect is that at each rollover, the issuer will book to their accounts profits and losses made on their derivatives contracts. Because the survey is a snapshot of the market value of contracts in place as at March 31, the market-value results take no account of profits or losses recorded from the earlier succession of contracts.
- Banks in general, and some of the nonbanks with complex financial operations, found it difficult to extract the required market-value information. Given that frequent rollovers of debt, and the pooling of assets and liabilities for risk-management purposes characterized banks’ operations, direct matching of an overseas liability to a particular hedge was often not possible, and alternative ways of providing information were established on a case-by-case basis. Therefore, the market-value results for banks were regarded as indicative estimates only. Generally, the market-value estimates for the less complex nonbanks were regarded as of better quality, since these were typically enterprises with a small number of external foreign currency liabilities matched to specific financial derivatives contracts.
- Distinguishing the residence of counterparties to the derivatives contracts was a problem for some respondents. Those nonbank corporates who dealt directly with nonresident counterparties were easily able to do this; other nonbank corporates who dealt with resident intermediaries indicated that their usual practice was to deal with a resident bank. Banks indicated that their practice was to engage with nonresident counterparties.

### Hedging supplement questionnaire

**14.147** Incorporating the lessons of the consultations, the data requirements were set out in two questionnaire types: one type structured for banks, the other for nonbank corporates (Figure 14.2). In

**Figure. 14.2. New Zealand: Foreign Currency Liabilities—Questionnaires for Banks and Nonbank Corporate Entities**

**Questionnaire for Banks**  
**TABLE I**  
**Hedging of Long-Term Foreign Currency Liabilities<sup>(1)</sup>**

Currency <sup>(2)</sup> of contractual overseas liabilities <b>1</b>	Contractual overseas liabilities outstanding as at 31 March 2000 record amounts in foreign currency (million) <b>2</b>	Percentage of these contractual overseas liabilities as:	
		Hedged by: financial derivatives contracts <b>3a</b>	balance sheet assets <b>3b</b>
USD			Not Hedged <b>3c</b>
AUD			
JPY			
CHF			
DEM			

(1) These with original contractual maturity of 1 year or more.

(2) The following currencies are listed here as an example only. Columns 1–4—see “Notes to Tables.”

**Any comments regarding information you gave in this table:**

---



---



---



---

**Questionnaire for Banks**  
**TABLE 2**

**Hedging of Short-Term Foreign Currency Liabilities<sup>(1)</sup>**

Currency <sup>(2)</sup> of contractual overseas liabilities <b>1</b>	Contractual overseas liabilities outstanding as at 31 March 2000 record amounts in foreign currency (million) <b>2</b>	Percentage of these contractual overseas liabilities as:			Total NZ dollar original value of obligation on contractual overseas liabilities at 31 March 2000 \$NZ(m) <b>4</b>
		Hedged by:	Not Hedged <b>3c</b>		
		financial derivatives contracts <b>3a</b>	balance sheet assets <b>3b</b>		
USD					
AUD					
JPY					
CHF					
DEM					

(1) These with original contractual maturity of less than 1 year.  
 (2) The following currencies are listed here as an example only. Columns 1–4—see “Notes to Tables.”

**Any comments regarding information you gave in this table:**

---



---



---



---

THANK YOU FOR YOUR TIME.





Figure 14.2 (concluded)

**GUIDE TO TABLES**

General

1. Please refer to "Notes to Tables 1 & 2."
2. In column 2 of the table, please show your gross outstanding overseas liabilities by foreign currency. It's your option to report (a) grouping all your (e.g. USD) liabilities together or (b) report each (e.g. USD) liability on a separate line.
3. If possible please provide data by the term structure, long-term overseas liabilities (Table 1) and short-term overseas liabilities (Table 2). If can't distinguish, please provide all data together in one table.

**Please Note: These are simplified examples for your guidance with notional exchange rates.**

**Example 1 Table line 1 USD**

November 1999—The NZ company enters into contractual liability of \$US500 million to nonresident lenders (column 1 & 2).  
 At the same time, the NZ borrower enters 100% of U.S. borrowings in a swap contract with a nonresident counterparty whereby the NZ borrower receives \$NZ725 million in exchange for \$US500 million at exchange rate 1\$NZ = \$US0.69.  
 At 31 March 2000—the exchange rate is 1\$NZ = \$US0.55, the market value of the derivative contract on \$US500 million is \$NZ909 million, and is recorded in a net assets position as positive \$NZ184 million (column 4C; 909–725=184).

**Example 2 Table line 2AUD**

November 1999—The NZ company enters into contractual liability of \$AU100 million to non-resident lenders (column 1 & 2).  
 At the same time, the NZ borrower enters 85% of AU borrowings in a swap contract with a nonresident counterparty whereby the NZ borrower receives \$NZ106 million in exchange for \$AU85 million at exchange rate 1\$NZ = \$AU0.80  
 At 31 March 2000—the exchange rate is 1\$NZ = \$AU0.83, the market value of the derivative contract on \$AU85 million is \$NZ102 million, and is recorded in a net liability position as negative \$NZ4 million (column 4D; 85 – 106 = –4).

**Example 3 Table line 3 DEM**

DEM liabilities completely matched to, e.g., expected export receipts.

**Example 4 Table line 4 JPY**

Short-term trade credits and JPY not covered at all.

**Example 5 Table line 5 CHF**

CHF liabilities matched to foreign-currency-denominated assets recorded on the balance sheet—e.g., foreign currency bank deposits, export bills and foreign trade debtors, investments in overseas subsidiaries.

**Hedging of Foreign Currency Liabilities**

Currency <sup>(2)</sup> of contractual overseas liabilities 1	Contractual overseas liabilities outstanding as at 31 March 2000 record amounts in foreign currency (million) 2	Percentage of these contractual overseas liabilities as:				Market value of the derivative contracts that hedge overseas liabilities as at 31 March 2000 with a					
		Hedged by:		Naturally Hedged by expected future revenues (e.g. export receipts) 3c	Not Hedged 3d	resident counter-party		non-resident counter-party			
		financial derivatives contracts 3a	balance sheet assets 3b			financial derivatives in a net asset position \$NZ(m) 4a	financial derivatives in a liability position \$NZ(m) 4b	financial derivatives in a net asset position \$NZ(m) 4c	financial derivatives in a net liability position \$NZ(m) 4d		
USD	500	100%						184			
AUD	100	85%		15%							–4
DEM	200			100%			0	0	0	0	0
JPY	10				100%		0	0	0	0	0
CHF	300		100%				0	0	0	0	0

addition, within each questionnaire type, the basic form was customized into several versions to meet the needs of various respondents. Typically, the customized form of the questionnaire was determined during the consultation meeting with a respondent, redrafted by BOP staff, and sent back to the respondent for confirmation and then completion. Additionally, a set of definitions of terms used and a guide to the questionnaire with worked examples were supplied to each respondent.

**14.148** Each of the two questionnaire types had two parts; the first part requested foreign currency external debt data and established the extent and type of hedging; the second part requested market-value information. Separate tables requested data on a long-term and short-term attribution (original maturity basis).

**14.149** In the section on the extent and type of hedging, respondents are asked to report:

- The currency of their original contractual overseas liabilities as at the survey date, March 31;
- The foreign currency amounts of their contractual overseas liabilities as at the survey date, March 31 (this figure was to be the same as reported in the overseas debt survey); and
- The percentage of these overseas liabilities that at the survey date were:
  - hedged, using financial derivatives;
  - hedged naturally against balance sheet assets;
  - hedged naturally against other receipts (non-bank corporates only); or
  - not hedged.

**14.150** In the market-value section of the questionnaire, respondents were asked to report the market value of derivatives contracts that hedge overseas liabilities as at the survey date. Net asset and net liability positions were asked for separately, and by resident and nonresident counterparties.

### **Implementation**

**14.151** After the first survey, it was decided that the results were of sufficient quality and significance to warrant continuation of the project. So, data were collected as at March 31, 1999, and the 1998 and 1999 results were published as supplementary information alongside the 1999 Overseas Debt statistics. In line with expectations at the start of the project, the supplementary hedging information was pub-

lished with a status of “indicative estimates” (as opposed to “official statistics”), because of the limited coverage of the survey and the indicative nature of the net market-value financial derivatives data from the banks and certain nonbanks. Nonetheless, users reacted favorably to the release of these data, and there was an increase in confidence in the quality of the Overseas Debt statistics.

**14.152** Therefore, the hedging supplement was repeated in 2000, with the sample of respondent enterprises updated using more recent information available from the Total Overseas Debt and Annual Capital Account surveys.

### **Lessons learned**

**14.153** Responsiveness to the needs of users of published statistics and of respondents is important. The hedging supplement project arose from user concerns, while the responsiveness to the circumstances of respondents contributed to the usefulness of the published results. For instance, customizing the questionnaire according to sector and within sectors ensured better-quality data than would have been achieved with one standard questionnaire, and discussing alternatives with respondents when they were unable to supply the market-value financial derivatives data as originally requested allowed the BOP staff to produce estimates that might not otherwise have been possible.

**14.154** Consultation was essential. There were several aspects to this:

- Consultation with respondents was essential. Personal visits were of greatest value because they allowed a two-way exchange of information; increased respondent understanding of, and support for, the survey objectives; and enabled BOP staff to learn more about market practice, resulting in a better questionnaire, better-quality data, and a greater understanding of the data supplied.
- Bringing together respondents (those people who actually complete the questionnaire) and users of the published statistics from the same organization was very useful; these two groups sometimes had little knowledge of each other’s positions. Bringing them together with the BOP staff provided the opportunity for all parties to better appreciate the roles of all the parties involved.
- Pooling of knowledge was key. The consultation and liaison between the SNZ and the private bank,

and the statistical office and the central bank, were an essential feature of the project. The private bank provided the perspectives of a user of the statistical output, a market participant, and a data supplier; and the central bank offered conceptual and technical advice, and an overall perspective of financial market operations. In addition, consultation between SNZ and the survey respondents gave further insight into market operations. This pooling of information was especially beneficial because the measurement of hedging was a new and highly technical subject, and new territory for a national statistical office.

### **Future of the supplement**

**14.155** The original intention had been that, provided the results warranted, the hedging supplement would continue only until 2001, when the project to implement *BPM5* in full would be completed. However, following the positive user response, it was decided to continue the supplement, but in a modified form. Net market-value data are to be collected in the new Quarterly International Investment Survey—a balance of payments form being brought into line with *BPM5* requirements—which, as originally planned, will cover both hedged and trading positions in financial derivatives. The hedging supplement will continue to be repeated annually, for data as at March 31, but will collect data only on the extent of hedging by type, sector, and currency. That is, the function of the hedging supplement will be to continue to complement the external debt statistics.

## **Philippines**

### **System for Monitoring the External Debt of the Private Sector<sup>22</sup>**

**14.156** The Philippines extensively taps foreign funds to help support its large development financing requirements. Cognizant of the need for a systematic approach to managing external borrowings, the government enacted a law on foreign borrowings in the mid-1960s that instituted broad policies and safeguards on foreign borrowings. Subsequent legislation defined borrowing limits and vested

authority in the central bank to oversee compliance with the law from a foreign exchange standpoint.

**14.157** Administrative mechanisms were established in the early 1970s to implement the provisions of law and rationalize the debt-management process. The monitoring system covers foreign borrowings of both the public and private sectors. The government has always recognized the important role that the private sector plays in spurring economic growth and development, and hence the need to monitor its foreign borrowing. With exchange controls then in place, it was not difficult to implement the system and ensure compliance therewith. The system has evolved over the years to address new developments, including the progressive dismantling of barriers to capital movements. The 1990s also highlighted the importance of monitoring private sector borrowings as private sector enterprises incurred substantial amounts of external debt during the period to finance their development projects and other major undertakings, including those under build-operate-transfer and similar arrangements.

**14.158** Management of the country's external debt involves the concerted efforts of various government agencies, including the central socioeconomic planning body—a top-level interagency committee and the Finance Department. The *Bangko Sentral ng Pilipinas* (*Bangko Sentral*, or the Bank)<sup>23</sup> is at the forefront of these activities, having been mandated to ensure compliance with the provisions of law regarding foreign exchange concerns. The Bank keeps track of the debt stock, maintains outstanding liabilities within manageable levels, and ensures that borrowings are obtained on the best available terms. It currently performs these activities through the Monetary Board (its highest policymaking body) and the International Operations Department<sup>24</sup> (which handles the day-to-day activities of debt management).

<sup>22</sup>Prepared by the *Bangko Sentral ng Pilipinas*.

<sup>23</sup>The former Central Bank of the Philippines was reorganized into the *Bangko Sentral ng Pilipinas* effective July 3, 1993. As the new central monetary authority provided for in the Philippine Constitution, it enjoys fiscal and administrative autonomy.

<sup>24</sup>Formerly the Management of External Debt Department (MEDD), which was originally organized in 1970 as the External Debt Monitoring Office. MEDD was renamed as International Operations Department in October 1999 with the broadening of its responsibilities to include trade and investments.

### **Debt-management tools**

**14.159** The Bank presently employs a number of debt-management tools that were initiated and fine-tuned during the past three decades. These include Bangko Sentral policy issuances, which outline the rules, regulations, guidelines, and procedures for foreign borrowing activities (new issuances are promptly disseminated to the public and are complemented by press releases and structured briefing sessions, as appropriate); and administrative mechanisms, including an approval and registration process and a debt-monitoring system, both of which cover liabilities of all sectors of the economy.

### **Loan approval and registration**

**14.160** Approval for a loan proposal is applied for by a private sector borrower and must be granted by the Bangko Sentral before the covering documents may be executed and the funds disbursed. The Bank's evaluation process involves a thorough review of the proposal to determine, among other things, consistency of loan purpose with the country's overall development thrust, benefits expected from the project, reasonableness of financial terms and conditions, and the loan's impact on the country's total debt-service burden vis-à-vis the economy's capacity to meet maturing obligations.

**14.161** In order to ensure compliance with the terms and conditions of the Bangko Sentral's approval, the private sector is required to register foreign loans following receipt of borrowed funds. The borrower is required to submit a copy of the signed loan documents as well as proofs of disbursement and utilization of loan proceeds. After documents are found to be satisfactory, a Bangko Sentral Registration Document (BSRD) is issued that authorizes the borrower to buy foreign exchange from local banks for debt servicing on scheduled due dates. However, purchases of foreign exchange from banks to cover any payments not consistent with the loan terms reflected in the BSRD require prior Bangko Sentral approval.

**14.162** Prior to the 1990s, and consistent with existing controls on foreign exchange inflows and outflows, all foreign borrowing proposals had to be approved and registered by the old central bank. Each purchase of foreign exchange from the banking system for debt servicing was likewise subject to prior central bank approval. But with the liberalization of

foreign exchange rules starting in the early 1990s, regulations were modified such that private sector borrowers<sup>25</sup> were, in general, given the option not to undergo the approval and registration processes, *provided* they did not purchase foreign exchange for debt servicing from the banking system.<sup>26</sup> This approach is consistent with the freedom residents now have in the use of their foreign exchange receipts that were previously subject to the mandatory surrender requirement.

**14.163** Nonetheless, despite the relaxation of foreign exchange regulations, most borrowers (particularly those with substantial funding requirements) choose to obtain approval from the Bangko Sentral for their foreign borrowings to ensure access to banking system resources, whenever necessary, to meet maturing debt payments. A large number of international creditors also require Philippine enterprises to have their borrowings approved by and registered with the Bangko Sentral to preclude any possible difficulty in servicing the account.

### **Monitoring system for external debt**

**14.164** The current (September 2000) external-debt-monitoring system covers all external obligations under any maturity category (short-, medium-, and long-term) in any form (loans, advances, deposits, bonds, etc.) owed by the different sectors of the economy (the monetary authority, central government, bank and nonbank enterprises, both state- and privately owned) to all types of creditors (multilateral and bilateral sources, foreign banks and nonbank financial institutions, foreign suppliers and buyers, bondholders/noteholders, and others).

**14.165** The system, which relies on reports from various sources, processes and stores information in a central database, and generates reports using programs developed by the Bangko Sentral. Banks transmit data electronically while others submit hard-copy reports. Steps are being undertaken for a

<sup>25</sup>There was no change in policy on public sector borrowings because the policy emanates from provisions of the Philippine Constitution and other legislation.

<sup>26</sup>Exceptions to this rule are borrowings that would involve or result in any liability, whether real or contingent, on the part of a public sector enterprise or a local bank to a nonresident (for example, arising from guarantees), which continue to be covered by the approval and registration process.

gradual shift to electronic reporting, at least for the major nonbank entities.

#### *Reporting system*

**14.166** Report forms are designed considering the type of data required (data collected are used both for regulatory as well as statistical purposes) and the source of information. There are four major data sources that report to the Bangko Sentral on a regular basis.

- *Borrowers*: Borrowers (bank and nonbank) are important data sources because they have first-hand knowledge of transactions in, and balances of, their foreign loans. Familiarity with the reporting system, which was instituted during the era of exchange controls, facilitates compliance by borrowers because the required internal systems and procedures have long been established. With the liberalization of foreign exchange rules, the Bangko Sentral has become more aggressive in propagating information on, and compliance with, its reporting requirements. It takes a proactive approach in this regard by directly communicating with borrowers (particularly new ones with substantial funding requirements); providing advice on the Bank's reporting requirements; explaining the need for, and uses of, data requested; and exerting moral suasion to obtain the borrower's cooperation. Even with the more relaxed regulatory environment, the Bangko Sentral continues to wield substantial influence and enjoys high credibility in the country, allowing it to successfully solicit the cooperation of data providers.
- *Major foreign creditors*: Creditors' reports allow validation of data provided by the borrowers on their stock (and flows in some instances) of external debt, and also supplement data obtained from other sources.
- *Local banks (including branches/subsidiaries of foreign banks operating in the Philippines)*: Bank reports provide data on individual cross-border transactions involving purchases and sales of foreign exchange that are external-debt-related, particularly those that no longer require prior approval and/or registration. Monetary penalties and other sanctions help ensure compliance with reporting requirements.
- *Major institutional investors in the country (such as nonbank financial institutions)*: In order to produce a more accurate measure of external debt, information on investments by these institutions in Philippine debt instruments floated offshore is

used to adjust the external debt stock since these transactions are between residents.

**14.167** In general, data are required in absolute values in original currencies, although the U.S. dollar equivalent is required for bank reports to facilitate comparison and cross-checking with data that are submitted in aggregate pesos and U.S. dollar equivalent to other Bangko Sentral departments/units.

**14.168** Reported data on private sector accounts are strictly confidential to the Bangko Sentral; thus, figures are released only in aggregates. Disclosure of data on individual accounts or transactions requires clearance at the highest level (the Monetary Board), and the concerned party's consent to the release of data or waiver of right to confidentiality is normally sought.

#### *The external debt database*

**14.169** The external debt database was designed to allow monitoring of information on individual foreign loan accounts through the entire loan cycle from approval through disbursement, registration, and repayment.

**14.170** A master record for each account is created and updated for any changes in basic loan information during the life of the loan. Details of each account maintained in the database include the contracting parties (debtor, creditor, and guarantor/s) and credit terms (maturity, repayment terms, interest rate, and commitment fee).

**14.171** Loan transactions (drawings, principal, and interest payments) are entered into the system after reports received have been verified for consistency and accuracy. These transaction data are reflected in the reports on external debt and on the balance of payments.

**14.172** Data are maintained in original currencies but can be easily converted into U.S. dollars or other currencies. The system makes use of several libraries—foreign exchange rates of major currencies, country, and institution libraries (debtor, creditor, and guarantor).

#### *Output reports*

**14.173** The system can produce consolidated or detailed reports such as basic loan information and

**Table 14.7. Total Philippine External Debt<sup>1</sup>***(Millions of U.S. dollars, end-period)*

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	March 2000	June 2000
<b>By borrower</b>	<b>29,955</b>	<b>31,392</b>	<b>32,089</b>	<b>35,535</b>	<b>38,723</b>	<b>39,367</b>	<b>41,875</b>	<b>45,433</b>	<b>47,817</b>	<b>52,210</b>	<b>52,415</b>	<b>52,164</b>
Public sector	24,458	25,552	25,666	29,718	30,883	30,116	27,385	26,958	30,310	34,800	35,441	34,932
Banks	6,202	5,937	3,261	2,777	3,163	3,452	3,252	4,686	5,805	5,746	5,602	5,654
Nonbanks	18,256	19,614	22,406	26,941	27,721	26,664	24,132	22,271	24,506	29,054	29,839	29,278
Private sector <sup>2</sup>	5,497	5,840	6,423	5,817	7,839	9,251	14,490	18,475	17,507	17,410	16,973	17,232
Banks	1,711	1,802	1,448	521	980	2,000	5,379	5,978	5,410	4,159	3,897	3,680
Branches of foreign banks	996	1,055	603	422	376	259	348	609	494	423	383	394
Domestic banks	715	747	845	99	604	1,741	5,031	5,369	4,916	3,735	3,514	3,286
Nonbanks	3,786	4,038	4,975	5,296	6,859	7,251	9,112	12,497	12,096	13,251	13,076	13,552
<b>By maturity</b>	<b>29,955</b>	<b>31,392</b>	<b>32,089</b>	<b>35,535</b>	<b>38,723</b>	<b>39,367</b>	<b>41,875</b>	<b>45,433</b>	<b>47,817</b>	<b>52,210</b>	<b>52,415</b>	<b>52,164</b>
Short-term	4,376	4,827	5,256	5,035	5,197	5,279	7,207	8,439	7,185	5,745	6,009	5,932
Medium- and long-term	25,579	26,565	26,833	30,500	33,526	34,088	34,668	36,994	40,632	46,465	46,406	46,232
<b>By creditor type</b>	<b>29,955</b>	<b>31,392</b>	<b>32,089</b>	<b>35,535</b>	<b>38,723</b>	<b>39,367</b>	<b>41,875</b>	<b>45,433</b>	<b>47,817</b>	<b>52,210</b>	<b>52,415</b>	<b>52,164</b>
Multilateral	7,411	7,935	8,323	9,202	9,859	9,617	8,634	8,638	10,058	10,245	9,934	9,864
Bilateral	8,547	9,572	11,328	13,369	15,033	14,393	13,439	13,307	14,926	16,429	16,116	15,983
Banks and other financial institutions	10,815	10,227	5,692	5,177	5,530	6,345	8,373	10,176	9,672	10,340	10,206	10,284
Bondholders/noteholders	865	851	3,754	4,567	4,727	6,206	8,725	10,633	11,209	12,951	13,865	13,396
Suppliers/exporters	2,312	2,802	2,963	3,213	3,549	2,587	2,588	2,359	1,562	1,690	1,697	1,882
Others	5	5	29	7	25	219	116	320	390	555	598	755
<b>By country</b>	<b>29,955</b>	<b>31,392</b>	<b>32,089</b>	<b>35,535</b>	<b>38,723</b>	<b>39,367</b>	<b>41,875</b>	<b>45,433</b>	<b>47,817</b>	<b>52,210</b>	<b>52,415</b>	<b>52,164</b>
Japan	8,627	9,546	9,210	11,112	12,682	12,169	11,109	10,293	11,887	14,205	14,184	14,031
United States	5,808	5,552	7,156	7,064	3,812	3,771	4,190	4,569	4,566	5,314	4,704	4,993
United Kingdom	1,141	1,108	641	1,297	363	611	511	445	399	438	537	481
France	1,447	1,085	850	725	712	961	1,579	1,899	1,743	1,621	1,433	1,287
Germany	620	693	700	742	885	967	1,298	1,635	2,122	2,435	2,620	3,109
Others	4,036	4,622	1,455	826	5,682	5,065	5,829	7,321	5,832	5,001	5,138	5,003
Multilateral agencies	7,411	7,935	8,323	9,202	9,859	9,617	8,634	8,638	10,058	10,245	9,934	9,864
Bondholders/noteholders	865	851	3,754	4,567	4,727	6,206	8,725	10,633	11,209	12,951	13,865	13,396
<b>By currency</b>	<b>29,955</b>	<b>31,392</b>	<b>32,089</b>	<b>35,535</b>	<b>38,723</b>	<b>39,367</b>	<b>41,875</b>	<b>45,433</b>	<b>47,817</b>	<b>52,210</b>	<b>52,415</b>	<b>52,164</b>
U.S. dollar	13,016	12,931	13,471	14,247	14,953	16,573	21,660	25,946	25,600	27,381	28,206	28,069
Multicurrency loans	5,888	6,164	6,264	6,931	7,529	7,543	6,718	5,965	6,333	5,939	5,647	5,547
Japanese yen	7,193	8,273	8,530	10,605	12,263	11,635	10,600	10,260	11,878	14,480	14,392	14,340
Special drawing rights	1,258	1,554	1,683	1,910	1,824	1,576	1,192	1,680	2,425	2,700	2,654	2,644
Others	2,600	2,470	2,141	1,843	2,154	2,039	1,706	1,582	1,581	1,710	1,515	1,563

<sup>1</sup>Covers BSP approved/registered debt owed to nonresidents, with classification by borrower based on primary obligor per covering loan/rescheduling agreement/document.<sup>2</sup>Excludes the following monitored private sector accounts:

	1994	1995	1996	1997	1998	1999	March 2000	June 2000
(1) Intercompany accounts (gross "Due to head office/branches") of Philippine branches of foreign banks	519	861	2,694	3,074	3,060	2,906	2,473	2,369
(2) Private sector loans without BSP approval/registration	100	455	562	925	1,404	1,331	1,337	1,316
(3) Private sector obligations under capital lease agreements			396	1,296	1,228	1,597	1,586	1,574

transactions; different profiles of debt stock (such as by maturity—original or remaining basis, borrower's sector, currency, and creditor's country, based either on residency or head office/citizenship); transaction summaries and projected debt-service burden. An example of a debt table generated from the system is shown in Table 14.7. The database

structure allows generation of summaries of any data element—for example, outstanding balances, loan disbursements, and principal payments.

#### *Review of debt statistics*

**14.174** Statistics on the debt stock produced from the system are compared with those contained in

other publications such as the BIS's *Quarterly Review*, as well as the World Bank's *Global Development Finance*.

### Prospects

**14.175** The country's external-debt-monitoring system remains robust, enabling the Bangko Sentral to meet vital data user requirements. However, potential reporting gaps could emerge in the liberalized foreign exchange regulatory environment. Thus, the system is continuously reviewed and refined, and additional possible sources of information and mechanisms for data capture are being explored. The objective is to further strengthen the Bangko Sentral's capability to produce comprehensive, reliable, and timely debt statistics necessary for the exercise of its regulatory mandate, for policy formulation, and for meeting the requirements of other data users.

## Turkey

### Measurement of Short-Term External Debt<sup>27</sup>

**14.176** In Turkey, external debt statistics are compiled in two different institutions: the Undersecretariat of Treasury, and the Central Bank (CBRT). The treasury is responsible for *medium- and long-term debt*, which mainly consists of project and program finance, international money markets credits, bond securities, as well as other private sector credits, whereas the CBRT is responsible for *short-term debt*, including that of the central bank, banks, as well as other nonbank private and public institutions (other sectors). The CBRT disseminates monthly data on short-term debt, identifying short-term debt of the central bank, banks, and other sectors; trade credit is separately identified for the other sectors.

### Legal framework

**14.177** Turkish legislation currently in force allows residents to borrow freely abroad. Banks can act as intermediaries to such credits by guaranteeing or not guaranteeing them. For short-term foreign borrowings, banks are responsible for reporting to the central bank on a credit information form the details of their own activity, and for collecting and reporting the details of the transactions of their clients.

<sup>27</sup>Prepared by the Central Bank of Turkey.

### Definition of institutional sectors

**14.178** The institutional sector classification used by the CBRT in compiling short-term external debt data is consistent with *BPM5*.

### Coverage

**14.179** The short-term external debt of the *central bank* consists of (1) foreign currency deposit accounts, (2) overdrafts, and (3) nonguaranteed trade arrears (NGTAs). The foreign currency accounts correspond to approximately 99 percent of the entire CBRT short-term external debt stock as of the end of 1999. These accounts are opened by Turkish citizens, over 18 years of age, who have residence or working permits abroad, and possess valid Turkish passports. Individuals in public agencies authorized to work abroad for a long term, and those employed at the representative offices and bureaus abroad of public and private sector organizations are also entitled to open such accounts.

**14.180** The short-term borrowing of the *banks* includes (1) foreign exchange credits obtained abroad; (2) foreign exchange deposit accounts of nonresidents; and (3) foreign exchange deposit accounts of nonresident banks.

**14.181** The short-term debt of *private and public nonbank entities (other sectors)* is divided between trade credits and other credits. Trade credit includes import-related short-term debt, and prefinancing of exports. It accounted for approximately 80 percent of the other sector's short-term external debt at end-1999. Import-related debt, which has the largest share, consists of acceptance credits; letters of credit (reflecting import payments to be made, rather than actual liabilities themselves); and deferred payments for imports—essentially suppliers' credit. Other credits include foreign exchange credits extended by nonresident banks or corporations abroad.

### Methods of data collection

**14.182** Balance of payments data are compiled by the CBRT within the framework of the concepts and recording principles of *BPM5*. The data for short-term external debt mainly rely on banks' foreign exchange records. An exception is data on short-term debt arising from imports, which are derived from the import figures of the State Institute of Sta-

tistics (SIS) for the creation of the debt, and an estimation method for repayments.

**14.183** The bank reporting system provides data on short-term foreign exchange credits obtained from nonresidents by banks and other sectors, as well as foreign exchange accounts opened with domestic banks by nonresidents and nonresident banks. Also, banks report trade financing credits in the form of acceptances and prefinancing credits for exports.

**14.184** For data on credit arising from deferred payments for imports, in 1997 the central bank began using data from the SIS for the extension of credit, and data from banking records for the repayment of this credit, with the change in the stock of debt estimated as the difference between the two. This method of measuring short-term debt gave rise to sharp annual increases in the estimated stock of trade credit, which became especially noticeable in 1999, when a sharp increase occurred despite a significant decline in imports. From a survey of banks, it was discovered that these kinds of transactions have short maturity. Also, it was discovered that the data from the banks did not accurately capture all repayments, and so the stock of trade credits was overestimated. Consequently, the central bank developed a new methodology for measuring repayments, on the assumption that this form of trade credit is essentially repaid within a three-month period. Data were revised for the period 1996–99. The consequence was a significant downward revision to the stock of short-term external debt.

**14.185** Data on short-term loans are provided by the banks on a transaction basis when they are received by the banks and the maturity exceeds 180 days, and, without a maturity exemption, received by other sectors for which the domestic banks act as intermediaries or as guarantors. The details reported include the creditor, the country from which the credit is received, the borrowing sector (public/private), the repayment schedule, the date of agreement, the date of last payment, the interest rate, the amount of the loan, and the currency. The outstanding value of these short-term loans is computed by accumulating the monthly flow data in U.S. dollar equivalent by applying cross-rates prevailing on the date of the transaction, and adding these cumulated transactions to the previous month's end-of-period stock data, valued at exchange rates at the end of the month.

## Uganda

### Data Requirements for the HIPC Initiative<sup>28</sup>

**14.186** In 1998, Uganda became the first country to receive relief under the IMF's first Heavily Indebted Poor Countries (HIPC) Initiative, and again in 2000, it was the first country to receive assistance under the Enhanced HIPC Initiative. For Uganda, the intention of the HIPC Initiative is to reduce the external debt burden to a sustainable level, so that the savings can be used for social development. On each occasion it sought relief, Uganda was required to provide accurate external debt statistics. This case study sets out how Uganda was able to produce these data, and the external data required.

**14.187** Even before the HIPC Initiative, Uganda had already taken steps to reduce its external debt burden and hence had begun the work to develop good external debt data.

- *Negotiations for debt rescheduling with Paris Club creditors.* Debt rescheduling was effected under Toronto (1989), enhanced Toronto (1992), and Naples terms (1995), where Uganda had reached an exit to any Paris Club rescheduling. But reschedulings were applied to pre-cutoff loans—which was about 4 percent of the total stock of debt, given that Uganda's cutoff date was June 1981.
- *In 1991, the government implemented the first debt strategy.* Among other things, this placed strict limits on borrowings—loans were only to be contracted for priority projects. Also, Uganda bought back a big portion of its commercial debt using a grant from the International Development Association (IDA) and other bilateral donors, totaling \$153 million.
- *An enhanced debt strategy was implemented following a 1995 study undertaken by a consultant, in consultation with Ugandan officials.* The finding that the biggest burden was multilateral debt, and that it would continue to increase from 1998 onward as long-term obligations matured, resulted in the formation of the Multilateral Debt Fund. A total of \$135 million was contributed to this fund—by the Netherlands, Sweden, Switzerland, Denmark, Norway, and Austria—to meet debt obligations from the four

<sup>28</sup>Prepared by the Bank of Uganda.

major multilateral creditors—IDA, the African Development Bank, the African Development Fund, and the IMF.

- *Uganda continued not to pay its non-Paris Club creditors until they accepted Paris Club comparable terms.* This is in line with the debt strategy of 1991, and the enhanced debt strategy of 1995, but excludes those creditors from whom new disbursements are received for new projects.
- *Uganda continued to adhere to borrowing on highly concessional terms (IDA terms) and requests for grants where applicable.*

**14.188** Notwithstanding all of the above endeavors, Uganda found that its debt was still unsustainable and so sought relief under the HIPC Initiative, which required good external debt statistics.

### ***Institutional arrangements***

**14.189** By act of parliament (the Loans and Guarantee Act), public external debt borrowing is vested in the Ministry of Finance. The minister signs all public debt loan agreements or gives powers of attorney to other senior officials to sign on his/her behalf. The ministry, therefore, performs the functions of negotiating, loan contracting, disbursement authorization and monitoring, repayment authorization, and recording of the external debt position. It also handles other aspects of the financial flows to the country, including grants and aid from nongovernmental organizations.

**14.190** In the early 1980s, the ministry delegated part of the function of data recording, monitoring, and effecting payments to the Bank of Uganda (central bank) because records on loan documents in the ministry had been destroyed during the 1979 war. Once it acquired the responsibility, the central bank created the External Debt Management Office (EDMO), which was subsequently combined with the then Exchange Control Department to form the Trade and External Debt Department (TEDD) within the research function.

**14.191** At that time of the handover of responsibility, debt data records were not accurate because all creditors were not known, and so what Uganda owed could not be verified easily. Therefore, the tendency was to rely on creditor billing statements, which at times were inflated. Later, in 1991, to establish Uganda's stock of debt and streamline the debt

records, a consultant—S.G. Warburg—was employed to carry out a comprehensive audit report of the external debt data. Letters were written by the minister of finance to all known creditors to avail information on their claims, and the information received was cross-checked by the consultants with records from other international institutions, and with Uganda's own data.

**14.192** As part of the process the consultant, together with the central bank staff, created a new system for recording all loans, which continues to the present. UNCTAD's Debt Management and Financial Analysis System (DMFAS) was introduced,<sup>29</sup> with each loan given a unique DMFAS number, and loan details captured in a computerized database. The data captured are similar to those shown in Table 11.1, in Chapter 11, and cover, for each instrument, details of its type, disbursements, borrowing terms, debt-service payments, exchange and interest rates, and, if necessary, any debt-restructuring activity. Also, new filing cabinets were put in place, so that for each loan Uganda has a manual file with the loan agreement and all correspondence.

**14.193** When the ministry contracts debt and signs an agreement, it sends a copy of the loan agreement to the central bank, where the loan terms are entered in the database. As the loan is disbursed, various types of disbursement information are received from the creditor, posted in the computer, and filed in the manual file. To process payments, bimonthly meetings are held between the central bank and the ministry to consider debt-service projections, which are produced from the DMFAS system. These projections are cross-checked with the billing statements received from the creditors and, according to the debt strategy, a decision is made on which creditors are to be paid.

**14.194** Uganda is now using DMFAS version 5.1.1, which has the World Bank's Debt Sustainability Module Plus (DSM Plus) for calculating the (net) present value of debt, a requirement for the HIPC Initiative.

### ***Uganda's stock of debt***

**14.195** Table 14.8 presents Uganda's stock of debt as at June 30, 2000. It totaled \$3.57 billion. This debt

<sup>29</sup>The DMFAS system is described in detail in Chapter 18.

**Table 14.8. Uganda's External Debt Obligation by Creditor as at June 30, 2000***(Millions of U.S. dollars)*

Creditor	Total Debt	Percent of Total
<b>Multilateral</b>	<b>2,927.9</b>	<b>81.9</b>
<b>Bilateral</b>	<b>592.4</b>	<b>16.6</b>
Paris Club	259.0	7.2
PC pre-cutoff	110.1	3.1
PC post-cutoff	148.9	4.2
Non-OECD (Non-Paris Club)	333.5	9.3
<b>Commercial/Other</b>	<b>53.8</b>	<b>1.5</b>
<b>Total</b>	<b>3,574.0</b>	<b>100</b>

Source: Trade and External Debt Department, Bank of Uganda.

is broken down into three major categories: multilateral debt, bilateral debt, and commercial debt.

#### **Data requirements of the HIPC Initiative**

**14.196** The HIPC Initiative required Uganda to undertake a debt-reconciliation exercise with all creditors as at end-June 1997 for the first HIPC, and end-June 1999 for the Enhanced HIPC.

#### *Exposure to the HIPC Initiative*

**14.197** During the preparation for the first HIPC Initiative it was necessary to train TEDD and ministry staff on its requirements. Consequently, a pre-HIPC debt-sustainability analysis workshop was organized by External Finance for Africa (now Debt Relief International), the Macroeconomic and Financial Management Institute for Eastern and Southern Africa (MEFMI), the World Bank, and UNCTAD, and sponsored jointly by the Swedish International Development Agency, the Bank of Uganda, and the Ministry of Finance to help build capacity in producing the external debt data required for the HIPC Initiative.

**14.198** Following attainment of the first HIPC Initiative, a workshop on post-HIPC debt-sustainability analysis, sponsored by MEFMI, Debt Relief International, UNCTAD, the Bank of Uganda, and the Ministry of Finance was held in Uganda in January 1999. From this workshop it was discovered that Uganda's debt was not sustainable, and so more relief was needed. In addition to the above work-

shops, regional workshops were organized by the same groups to enlighten Uganda's awareness on HIPC issues. Indeed, Uganda will always remain indebted to these agencies for the good work done, so allowing Ugandan officials to participate fully in the tripartite negotiations with the IMF, World Bank, and other bilateral donors.

#### *Debt data coverage*

**14.199** External debt that is covered under the HIPC Initiative is limited in all cases to that owed or guaranteed by the public sector. For Uganda, this includes all medium- and long-term borrowings of the central government, the central bank, and parastatals from multilateral institutions (including the IMF), bilateral governments (Paris Club and non-OECD), and commercial credits from banks, export guarantee agencies, and suppliers' credits whether or not a government guarantees them. Therefore, all the creditors presented in Table 14.8 are covered.

#### *Data validation*

**14.200** Uganda had to reconcile the debt data with all creditors, since it is normally expected under the HIPC Initiative that 95 percent of the value of external debt be fully reconciled with creditors at the decision point, with some allowance for delay in reconciling disputed debts or failure of some creditors to reply. To carry out this exercise effectively, the ministry wrote letters to all the relevant creditors requesting data on external debt outstanding and disbursed as at end-June 1997 for the first HIPC, and later for end-June 1999 for the Enhanced HIPC. The finance minister signed all the letters. They were sent to the latest-known address, but where the latest addresses could not be traced, the letters were sent to the embassies of the creditors in Uganda or Nairobi for onward transmission.

**14.201** The detailed information requested was as follows:

- Creditor's name;
- Amount of the loan;
- Date of signature;
- Availability date;
- Amount disbursed;
- Undisbursed amount;
- Amount of principal paid;
- Amount of interest paid;
- Amount of principal arrears;
- Amount of interest arrears; and
- Amount canceled.

**14.202** In the ministry and the central bank, a master file was opened up to store all the replies, with a copy of each reply placed in the individual files of creditors. The next step was to compare the loan position kept on the DMFAS system with that reported by the creditors. Where applicable, differences were identified for each loan, and there was correspondence with the creditors to sort out the differences. In some cases it was realized that there had been some disbursements that were not captured on DMFAS, or payments had been made that were applied differently on the maturities by the creditor (that is, payments for current maturities had been applied to arrears by the creditor), or different exchange rates had been used. Other creditors, like Egypt, said that they did not have any outstanding claims on Uganda, so their loans were removed from the database. Once the differences were resolved, where necessary, loan data were corrected.

**14.203** However, complicated and controversial issues arose on the following:

- *The acknowledgement of disputed debts*, such as military debts arising from past wars. This was true for a Tanzanian loan for which a verification exercise is still required, although the amount indebted was accepted in principle by Uganda.
- *The exchange rate used for converting debts* to the currency of repayment. For instance, some debts denominated in, say, Burundi francs in which the supplies were originally quoted.
- *The “ownership” of debts that had been traded* directly or on the secondary market. For instance, the loan that was supposed to be a claim of COFACE (France) had been sold to Centenary Rural Development Bank.
- *The level of arrears on “old” loans* (for example, for Libya and commercial debts), particularly if late interest charges had been accruing.

**14.204** Also, although the response was good for creditors that were being paid on schedule—such as multilateral and the bilateral Paris Club creditors—and for the Paris Club creditors that had just signed

the bilateral agreements, some bilateral non-OECD creditors were reluctant to reply. Various reminders had to be sent. On the other hand, some of them replied quickly, hoping to be repaid. The majority of commercial creditors never replied.

**14.205** For those creditors who responded, the reconciled data were sent to the IMF and the World Bank as requested, for further cross-checking with data received from the creditors. For all the multilateral creditors, where the reconciliation exercise indicated that arrears had accumulated, these had to be paid off before Uganda could qualify for the HIPC Initiative. For those creditors where no information was received, IMF and World Bank figures were taken and reconciled with the information included in the database, which had been agreed upon in the S.G. Warburg audit report.

#### **Data needs for measuring debt-burden indicators and debt relief**

**14.206** In Uganda’s experience, a country must make realistic assumptions when projecting data for new disbursements, macroeconomic indicators, balance of payments transactions, and budget revenue and expenditures because accuracy in these projections will affect the realization of sustainability ratios. For example, the impact of El Niño rains on export projections was a factor in Uganda’s external debt being unsustainable even after relief under the first HIPC Initiative was received. Also, even after making realistic assumptions and calculating the relevant balance of payments and budget projections, consideration is required about how financing gaps, either in the balance of payments or budget, will be filled.

**14.207** Sensitivity analysis is important to test alternative macroeconomic scenarios and to provide government with a picture of what would happen if the central assumptions changed. Uganda uses models developed in both the World Bank’s DSM Plus and in the private sector (Debt Pro) for calculating debt sustainability for the HIPC Initiative.