

5. Other Practical Issues

Considerable logistics are required before a national survey can be conducted. This chapter provides some practical advice based on the experience of Task Force members. The chapter covers:

- a timetable;
- legal and confidentiality considerations;
- compiling, maintaining, and using a register of respondents;
- choosing and developing a computer package to process the survey results; and
- quality control.

I. Logistical Issues

5.1 The CPIS requires considerable preparation by individual national compilers if it is to be a success: from preparing a timetable, to consulting potential survey respondents, to deciding on the software packages that can be used to process the survey returns. This chapter discusses some of the preparatory steps and provides practical advice based on the experience of the experts on the Task Force. In the event that national compilers might also require additional advice, a network has been established to link compilers with considerable expertise in conducting portfolio investment surveys with those who need guidance in conducting such surveys. Compilers may contact any of the members of the IMF Task Force on the 2001 CPIS (shown at the front of the document) or the project manager at the IMF (the address is provided in Chapter 2, Section II.D).

II. Timetable

5.2 In preparing for the CPIS, one of the national compiler's first steps is to produce a timetable. It serves two main purposes: tasks are identified, and their sequencing is established. A timetable will help ensure the success of a national survey.

5.3 Each country's own timetable will depend on its circumstances. For example, those countries that have never organized a portfolio investment position survey will have a different timetable from those countries that conduct them regularly. Nonetheless, based on collective experience of the countries represented on the Task Force, a broad framework is set out below (and given visually in Figure 5.1), which can be adapted and, if necessary, expanded to meet local circumstances. The timetable uses the survey's reference date as a guide for surveys beyond the 2001 CPIS.

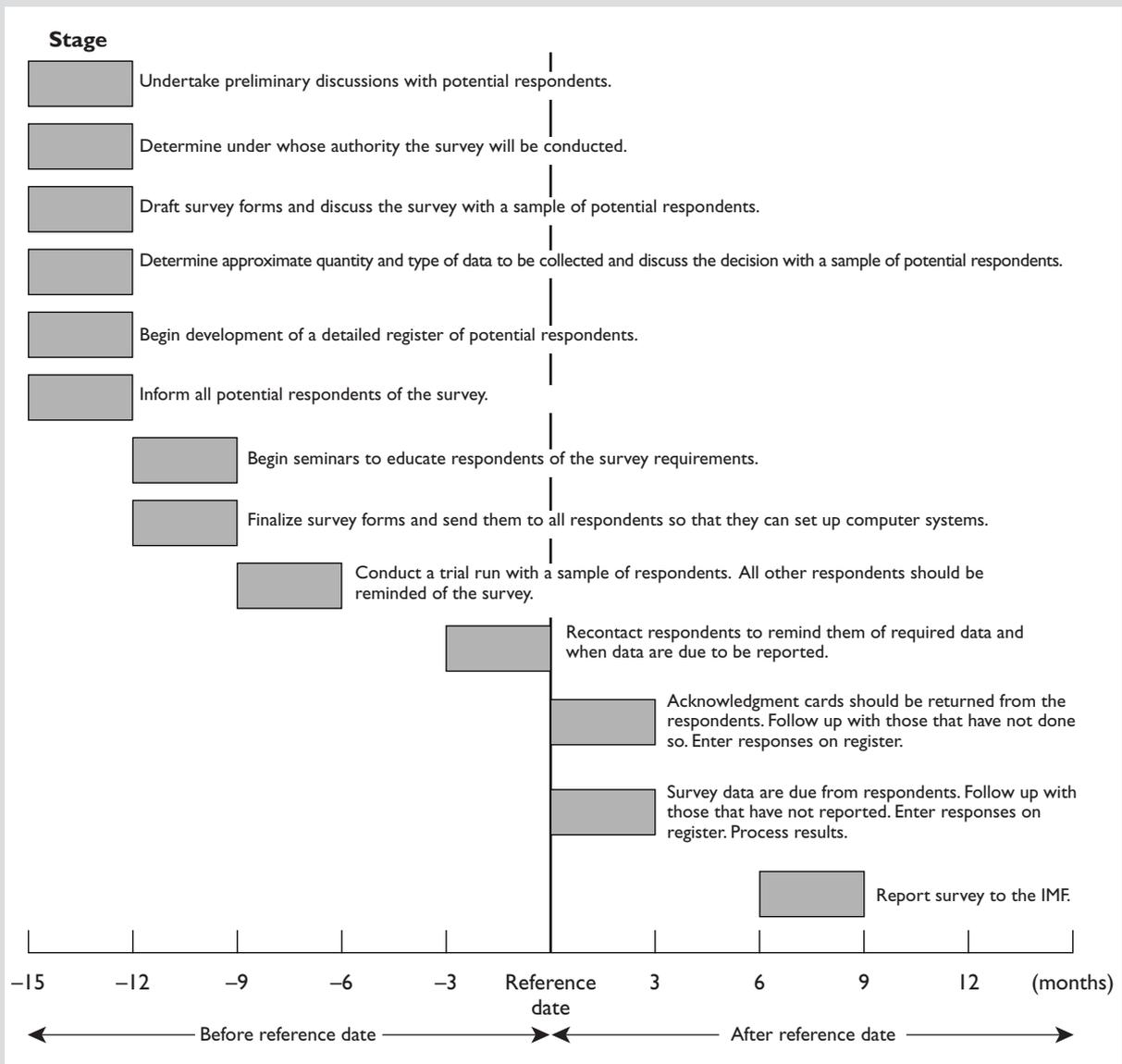
About 12 months before the reference date of the survey:

- Begin preliminary discussions with potential respondents to provide a broad overview of what is to occur by the survey date and to help determine the type of survey to be undertaken; that is, (i) end-investor; custodian, investment (fund) manager, or a combination of these; and (ii) aggregate or security-by-security.
- Determine under whose authority the survey will be conducted; if needed, seek agreement from the appropriate regulatory bodies.
- Prepare draft survey forms and discuss them with a sample of potential respondents.
- Determine approximate quantity and type of data to be collected and undertake initial investigations on how the data should be reported and processed. In this regard, consult with a sample of potential respondents.
- Begin development of a detailed register of potential respondents.
- Inform all potential respondents of the survey.

About nine months before the reference date of the survey:

- Begin seminars and other programs to educate respondents about the survey.
- Finalize survey forms and send them to all respondents so that they can set up the computer systems and other tools they will need to complete the survey.

Figure 5.1: Indicative Time Line for Conducting the CPIS



About six months before the reference date of the survey:

- Conduct a trial run with a sample of respondents. All other respondents should be reminded of the survey.

About one month before the reference date of the survey:

- Recontact (by mail) respondents to remind them of the survey's reference date and when data are due to be reported.

About one month after the reference date of the survey:

- Acknowledgment cards should be returned from the respondents. Follow up with those that have not

done so. Enter responses on register. See Appendix I, Model Form 1a.⁵⁴

About three months after the reference date of the survey:

- Survey data are due from respondents. Follow up with those that have not reported. Enter responses on register. Process results.

⁵⁴Use of an acknowledgment form, such as that shown in Appendix 1, Model Form 1a, is a valuable survey control technique because it ensures that all respondents, whether they are required to provide the

Nine months after the reference date of the survey:

- Report survey data to the IMF.

III. Legal and Confidentiality Considerations

5.4 Wherever possible, it is very important for countries to have the appropriate legislation in place so that the CPIS can be conducted on a mandatory basis and to cover concerns survey respondents may have about the confidentiality of data supplied. See the discussion on the appropriate legislative authority in Chapter 4, Section II.A.

5.5 Each country is unique in regard to these considerations. Italy's position is presented as an example.

5.6 In Italy, the regulations for the collection of data on cross-border and foreign-currency activity are contained in Article 21 of Law No. 148/1988:

Article 21: Information on currency movements for statistical purposes

(1) For the purposes of statistical information, the Italian Foreign Exchange Office may require authorized banks, other authorized institutions, and operators,⁵⁵ and other concerned parties to send data and information (periodically or in samples) on foreign exchange and cross-border transactions in which they have, in whatever capacity, been involved.

(2) Information and data collected shall be processed for each bank, class of transaction, and operator without naming the operators themselves and then stored in archives to which the Bank of Italy may have access insofar as the execution of its duties requires.

(3) Information and data shall be treated as Official Secrets until they are published; they shall be made available, upon request, to the Minister of Foreign Trade and to the Treasury Minister, who may use them in the preparation of the Treasury's biannual report to Parliament on currency movements.

value of the portfolio investment holdings or not, have received the form and are aware of their responsibilities regarding the survey. Failure to receive the form back from the respondent within a limited and specified time requires follow-up to make certain that the respondent has received the form and is aware of the survey's requirements.

⁵⁵According to directives from the Interministerial Committee for Credit and Savings.

(4) Statistics produced by aggregating data from at least three subjects and excluding references to a single operator may also be made available by the Italian Foreign Exchange Office to the Central Statistics Institute, to national and international public institutions, to authorized banks, and, upon payment, to research organizations and other private sectors.

5.7 The regulations were extended in May 1990 when a Ministerial Decree, put forward by the Interministerial Committee for Credit and Savings, enabled the Italian authorities to collect transaction data from nonbank operators. In October 1995, another directive from the same Committee enabled the Italian Foreign Exchange Office to collect position data from nonbanks.

5.8 In preparing for their national survey, the Italian authorities needed to address the issue of confidentiality. Article 21 guarantees the anonymity of the data supplied by operators. Confidentiality is not simply entrusted to a generic "official secrecy" rule or even to a more specific rule of "statistical secrecy" (i.e., the prohibition of disclosure of data referring to a single person) but, rather, is embodied in the very rules of collecting, processing, and storing the data. The second paragraph of Article 21 states, "the information and data collected shall be processed for each bank, class of transaction and operator without naming the operators themselves...." Furthermore, to meet the legal requirements, the Italian Foreign Exchange Office cancels respondents' names immediately after the data reported have been validated.

IV. Compiling, Maintaining, and Using a Register of Respondents

5.9 Producing a register of survey respondents (register) is an important function for the conduct of any national survey; however, countries participating in the CPIS will need to ensure that any register complies with the relevant data protection legislation. In some countries, if a register is maintained on a computer system and includes information about any identifiable individual, that information may be used only for an authorized purpose.

5.10 This section, based on the practical experience of Task Force members, presents some background on compiling and maintaining a register, ideas about what can be stored on the register (and on a computerized

register), and finally an explanation of how the register can be used during the national survey. No register can be developed until national compilers decide how they intend to achieve comprehensive coverage of domestic residents' holdings of securities issued by nonresidents, whether primarily through an end-investor survey, custodian survey, investment (fund) manager survey, or a combination of these options.

A. Compiling a Register

5.11 The sources of information on potential survey respondents are varied, and the work required to compile a register will depend on the extent to which a register already exists in the statistical agency. Box 5.1 provides guidance on how to compile a register, including the possible sources of information, based on the experience of the Australian Bureau of Statistics. In addition, national compilers should read Chapter XVIII of the IMF's *Balance of Payments Compilation Guide* (Washington, 1995) and particularly paragraphs 853 through 862. Table 5.1 sets out the sources of information used to maintain registers in countries that participated in the 1997 CPIS.

5.12 The next step, after the initial examination of the sources of information, is to produce a detailed list of potential survey respondents. The national compiler must be careful to select the "correct" population. To do so, the compiler should engage in some preliminary discussions with the largest institutional investors, such as pension funds, mutual funds, banks, insurance companies, and so on, as well as the appropriate trade associations. The discussions should make these institutions aware of the national survey and help the national compiler to decide upon the design of the survey.

5.13 If national compilers decide to conduct an aggregate survey primarily targeted at end-investors, they must decide whether to set a minimum threshold that excludes units with low-value investments in securities issued by nonresidents. For instance, the number of potential survey respondents identified in the review of sources may be very high, but in practice a significant proportion of investment in securities issued by nonresidents may be undertaken by, or channeled through, a relatively small number of large investors or financial institutions. A minimum threshold may reduce the respondent burden without adversely affecting quality; if necessary, the compiler might consider requiring reports from a sample of these "smaller investors." However, if there is to be a minimum threshold, the national compiler must be careful not to exclude

potentially important respondents. See also the discussion on reporting thresholds in Chapter 4, Section IV.

5.14 If the national compiler decides to conduct a survey targeted primarily at custodians but one that also covers end-investors, it is important to understand the relationship between major investors in securities issued by nonresidents and custodians to avoid omission or duplication of data. This point is emphasized in Chapter 4, Section II.B and II.C. One approach to this issue is to require all large investors to identify their domestic custodians, as well as to indicate any holdings of securities issued by nonresidents that they maintain with nonresident custodians. The relationship between end-investors and custodians could also be kept on file, but updating this could prove time-intensive.

5.15 Care is also needed in choosing which respondents to approach; an awareness of the operations, record keeping, and accounting practices of the target businesses is required. The unit from which data are to be collected—that is, the statistical unit—should reflect the level within the business structures at which portfolio investment position data are available and are appropriate, given the consolidated reporting obligations of business. Similar businesses will often have different internal arrangements, which necessitates special reporting arrangements (based perhaps on the degree of centralization or autonomy of related businesses). It may be necessary, therefore, to recognize reporting units inside the standard statistical unit. When approaching an end-investor that is also a custodian, it is of particular importance to ensure that it reports its own account holdings as well as those held on behalf of other residents. Again, it is recommended that national compilers consult the IMF's *Balance of Payments Compilation Guide* (Washington, 1995), paragraph 849.

5.16 The treatment and capture of data from unincorporated entities needs particular care. Because these entities may not prepare full sets of accounts, their investment in securities issued by nonresidents on their own account or as an intermediary may be missed or duplicated in the survey.

5.17 The register will need to be maintained given the likelihood that the survey will be performed on a continuing basis; otherwise, information regarding the entities to be surveyed and the statistical unit to be approached can quickly become out of date. Media reports are a good and timely source of updates for significant businesses, but a review of the sources

Box 5.1: Australia's Experience in Compiling a Register: Practical Advice

Australia has no central repository or transaction system for identifying or reporting international investment position (IIP) statistics. Australia has had an open economy with a freely floating exchange rate for nearly two decades, and no controls or approvals are required for investment flows (although some investment targets in Australia require approval of foreign ownership). To run surveys to measure international investment, it has therefore been necessary to compile a register of organizations from which the data can best be obtained. Some organizations are targeted for their role as end-investors/investees, whereas others are targeted as intermediaries (fund managers or custodians) to report on behalf of their clients.

The Australian Bureau of Statistics (ABS) has long experience in compiling and maintaining registers for statistical surveys. The main ABS business register is used for surveys of the economy and is generally sourced from business taxation reports. But this register is more focused on operating businesses with employees, rather than enterprise groups, and is deficient for those financing company parts of businesses that may have no employees but channel all the international finance accessed by the group. Even if this register were to be augmented with financing units, any survey drawn randomly from such a large register would be inefficient in terms of reporting load and public resources because of the large numbers of nil responses from organizations that have no international investment. Quality assurance is also difficult for international investment measures drawn from such surveys.

The ABS has therefore built a separate register of enterprise groups with international involvement. 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. This group approach limits the number of organizations that need to be contacted to those that can best report the information.

Sources of information for enterprises for this specialized international investment register are as follows:

- Existing registers of businesses maintained by the statistical agency or other government agencies, which can be approached with brief debt coverage surveys;
- 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 debt surveys and vice versa.
- Government administrative sources. Depending on legislation and administrative arrangements or the authority of the collection agency, these sources might include:
 - (a) taxation records, files, or lists;
 - (b) information held by foreign investment approval or monitoring boards;

- (c) information held by other regulatory authorities, such as lists of entities coming under their supervision and data monitored through supervision requirements (e.g., registered banks, other deposit-accepting institutions, securities brokers, investment managers, investment advisers, and authorized pension or mutual funds);
- (d) listings of registered custodial businesses that can hold debt securities and other assets on behalf of nonresidents, and lists of registered fund managers that can act on behalf of nonresidents;
- (e) statutory company reports and company registration details; and
- (f) records held in foreign exchange control or international transaction reporting systems (e.g., records identifying the originators or recipients of large portfolio investment flows [not available in Australia]).

Other official and regulatory sources, many publicly available, include annual statutory accounts for public companies held by the Australian Securities and Investment Commission, submissions made to the Foreign Investment Review Board, various material held by the Reserve Bank of Australia, and annual reports of other government bodies.

Media reports. Newspapers and periodicals are particularly useful sources of information on potential reporting entities. A high proportion of significant transactions are reported in the media, and these reports are used not only to update the register, but also to confirm data reported in the Survey of International Investment (SII). Apart from significant transactions, the media cover many smaller transactions as well as a high proportion of unusual transactions. The use of traditional print media is being supplemented with information obtained electronically from commercial business news services and via the Internet.

Publicly available databases. A wide variety of information is available from public databases. The information differs in completeness, accuracy, and 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 (e.g., Moody's, Standard and Poor's); 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.

Industry associations. These associations and their reports and releases can be a useful source. Apart from the public relations and liaison aspects of a close relationship between the statistical agency and industry associations, many either list members 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 in assisting statistical or data collection agencies.

referred to in Box 5.1 might be appropriate at discrete intervals, especially close to the time of dispatch of the survey forms.

B. Details Stored on a Register

5.18 The register should contain more than a simple list of names and addresses; it should also

(i) include relevant information on each reporting entity, (ii) control the mail-out and receipt of survey forms, and (iii) provide information on the status of the response. A possible list of items that can be stored is indicated in Box 5.2, and Box 5.3 indicates the kind of information that is stored by Statistics Canada and Singapore's Department of Statistics.

5.19 Computerizing the register should save compilers time and effort and reduce the scope for error in dealing with survey respondents when the survey is in operation. (See Box 5.2 for information that can be stored on computerized registers.) However, if a computerized register is to operate efficiently, careful planning and careful maintenance are required; the importance of this cannot be overestimated. The type of issues and tasks that national compilers need to consider include the following:

- taking account of the information flows to and from the database (the use of charts and diagrams is highly recommended in the planning phase);
- taking account of the specifications for interrogations and reports to be generated;
- devising a coding structure that embodies the defining characteristics of each respondent in its unique identification number (this is important because it allows the sorting and analysis of respondents and the tracking of nonresponse);
- ensuring that supporting hardware and software are sufficient for the task—for instance, that the memory and processing capabilities are such that response and retrieval times are acceptable;
- allowing time for a thorough tryout of the system before “live” use;
- backing up copies of data and software on a regular basis and storing them both on-site and at a remote location so that the files can be restored in the event of a system breakdown;
- ensuring appropriate systems security and access authorization;
- producing thorough documentation on the system; and
- providing for a suitable filing system for associated papers, not least the completed survey forms.

C. Use of the Register

5.20 Once the national survey is under way, the benefits of an efficient computerized register become apparent. The benefits accrue both at the initial stage of sending out survey forms and at the follow-up stage and beyond.

5.21 At the initial stage, compilers need to print and dispatch the survey forms and letters. To do so, they can generate the mailing labels from the computerized register. At the same time, a record can be written noting which survey respondents will be sent a questionnaire (e.g., set mail status to “yes”). Compilers can also perform a quality check to ensure that the right respondent is receiving the right survey form(s). This is par-

ticularly important if the mailing includes more than one type of survey form. It is very useful to include a postcard with the survey form (or use some similar technique) that respondents use to acknowledge receipt of the questionnaire and identify the person to contact. In this way, compilers can quickly identify problems and initiate follow-up action.⁵⁶ The national compiler should note in the response log those entities that have returned the postcard. National compilers should record the return of the completed survey form in the response log, along with the date of receipt. Any changes required to the register (for instance, name and address) could then be made. Compilers could run a report to verify that the correct entries have been made. Thereafter, they could distribute survey forms to the appropriate person for data capture and editing.

5.22 Respondents may need to contact the compiler for a number of reasons. The compiler should keep a record of each telephone call or correspondence, either in a manual file or as a note against the appropriate record in the response log file. If a survey respondent requires more time to complete the survey form, the compiler should note this information so that reminders are not sent. In such a case, the response log status is changed to indicate “in contact,” and follow-up procedures are suspended for a specified period. When new copies of the survey forms are requested, a re-mail is initiated, and additional forms are sent to the respondent with the follow-up procedures kept in place. The compiler must update the register if updated information is provided and run a check to confirm that correct details have been stored.

5.23 When the closing date for the return of completed survey forms has passed, the national compiler can select the overdue survey respondents from the response log, on the basis of the response status of “outstanding” and the mailing date, and prepare labels for envelopes and follow-up documents.

5.24 A number of reports can be produced on a regular basis to assess the status of the survey, including the following:

- *transaction reports*: lists of changes sorted by name, ID code, date, and so on.

⁵⁶The U.S. authorities have found it useful to publish a legally binding notice about the survey, which announces it and states that any institution meeting the reporting guidelines is legally required to report, whether or not the institution is sent a survey questionnaire. This approach might bring in some firms that are not on the register. Whether this approach can be undertaken in other jurisdictions depends on local institutional and legal arrangements.

Table 5.1: Sources Used to Build a Register or to Maintain It over Time

(M = main; S = secondary; O = occasional)

Countries	Government Administrative Sources								Publicly Available Databases						
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
Argentina				M	M										
Australia	M	O	O	M		M			M	M	S	S	M	O	
Austria	M														
Belgium				M	M	M									
Bermuda				M					O						M
Canada	M	O			M			S(1)					S	S	
Chile															
Denmark	M			M			M								
Finland					M		M		S				S		
France				M	M										
Iceland				M		O									
Indonesia	S			M	S										
Ireland	M		M	M	M	O			O	O	O	S	O	O	
Israel		S	S	S	S	M			S	S			S		
Italy	S			M	M	M	S		M						
Japan				S			M								
Korea							M								
Malaysia				M	M	O	M		S						
Netherlands				M		O									
New Zealand	M	O	O	O	S	S			S	O	O	O	S		
Norway	M			S			S						O		
Portugal				S		O	M			M		S	S		
Singapore	M			S	S	S							S	S	
Spain	M														
Sweden				M	S										
Thailand				M			M								
United Kingdom	(2)			M (3)	M (4)										S (5)
United States															
Venezuela				M	S				O	O	O		O		

(a) Existing registers of business maintained by the statistical agency or other government agencies. (b) Taxation records, files, or lists. (c) Information held by foreign investment approval or monitoring boards. (d) Central bank records, such as prudential information and lists of entities coming under the central bank's supervision (e.g., lists of registered banks and other deposit-accepting institutions). (e) Information held by other regulatory authorities, such as lists of entities coming under their supervision (e.g., lists of securities brokers, investment managers, investment advisors, and authorized pension or mutual funds). (f) Statutory company reports and company registration details. (g) Records held in foreign exchange controls or international transaction reporting systems (e.g., records identifying the originators or recipients of large portfolio investment flows). (h) Other (please specify). (i) International credit rating agencies' publications (e.g., Moody's, Standard and Poor's). (j) The stock exchange register. (k) Commercial equity registers' information services. (l) Market research reports or services, such as reviews by accounting or brokerage firms. (m) Media reports (newspapers and periodicals). (n) Trade associations and their associated reports and releases. (o) Other (please specify).

(1) Detailed monthly transactions from brokers. (2) Nonfinancial institutions (M); nonbank financial institutions (S). (3) U.K. banks' data collected for statistical purposes. (4) Nonbank financial institutions. (5) Nonbank financial institutions.

- *response log reports*: summary counts of survey forms mailed, received, deleted, and percentage outstanding; response log listing all survey respondents; survey status sorted by name, identification code, and so on.

V. Choosing and Developing a Computer Package to Process the Survey Results

5.25 Choosing the appropriate computer package is important and needs to be considered carefully by national compilers. This section is intended to provide some guidance on how to make this decision.

5.26 The most straightforward approach is to choose the computer package that is already standard in one's own statistical agency. This approach has a number of advantages: staff are already trained in how to use the package, the capabilities of the package are known, and computer support is presumably available if any technical difficulties arise. In addition, only limited time and effort need be spent on deciding on the appropriate package. However, if the survey is a new undertaking, it is worthwhile to consider whether the existing standard package can meet the processing requirements of the survey.

5.27 There are many ways to store information. The volume of data and whether the survey is to be

repeated regularly could determine how information is stored. For example, a small aggregate survey could be handled by a commercial spreadsheet program, whereas a large, detailed survey could require a relational database. However, if the survey is to be conducted regularly and reasonably frequently, the data might need to be held in time-series form and therefore require a different type of database. Table 5.2 outlines the systems used by the participants in the 1997 CPIS. This list is provided for information purposes only; the Task Force makes no recommendations. Compilers who approach commercial database vendors will need to judge whether the product meets their needs; Task Force members are prepared to assist countries in their deliberations about which system to use (their names and e-mail addresses are shown at the front of this *Survey Guide*).

VI. Quality Control

5.28 The importance of quality control⁵⁷ cannot be overestimated. If, despite all the preparations, survey respondents submit poor-quality data, the value of the whole exercise is undermined.

5.29 All experience suggests that national compilers can expect survey respondents to make mistakes. Those compilers conducting a national survey for the first time need to be especially vigilant in checking the data supplied; the more experience the respondent has in completing the survey form, the less likely that any significant error will be made.⁵⁸ Nevertheless, even the most experienced respondents can make mistakes.

5.30 National compilers can conduct quality-control checks on a number of levels in a number of ways. The compilers can include checks in the survey form, cross-check survey data against other reported data, and devise analytical checks. They should also be able to check data received from the domestic custodians or domestic end-investors at a detailed or aggregated level.

5.31 This section provides some guidance on a range of possible checks. Nonetheless, it should be

⁵⁷See Chapter 6 for some practical examples from countries involved in the 1997 CPIS.

⁵⁸The same applies for the compiler: an experienced compiler understands the requirements of the survey better than a novice. Also, when data have been received on an ongoing basis, the compiler is in a position to compare the most recent results with those in earlier returns.

Box 5.2: Information That Can Be Stored on a Computerized Register

Classification Information

Respondent identification code
Respondent name
Type of respondent (custodian, mutual fund, pension fund, etc.)
Respondent contact person
Address of respondent
Telephone number of respondent
E-mail address
Facsimile number of respondent
Language (of survey form)
Mailing status (yes or no)
Type of media sent to the respondent (survey form, diskette, letter, or other)
Flags to alert for special cases to be handled separately from the automated system

Response Log Details

Response status (mailed, received, in contact, re-mail, exempt, removed, etc.)
Type of media used by the respondent (survey form, tape, diskette, printout)
Type of record layout provided by the respondent (aggregate or detailed data)
Date mailed
Date re-mailed
Date received
Date of first follow-up
Date of second follow-up
Date removed

Some Useful Advice

At the planning stage, it is important to consider which fields will be filled automatically by the computerized system. For example, would the "date mailed" field be updated directly by the mailing program? Be sure to provide sufficient space for addresses and other such information; it may be appropriate to subdivide fields for some items (for example, distinguishing the postal code from the remainder of the address). Take care when assigning default values to fields and (as a safeguard against inputting errors) have an accessible, on-line, separate file that lists those types of input that are currently acceptable for a specified field; that way, unacceptable inputs will be rejected—for instance, if a letter is entered in a field that can "accept" only numbers. It is also useful to have a comment area for each entry.

borne in mind that the more the survey form fits the domestic circumstances and the more that survey respondents are consulted about what is required of them, the greater the probability of receiving good-quality data and, perhaps just as important, the greater the likelihood of cooperation if the national compiler needs to question data supplied by the respondent.

5.32 Because one of the purposes of the CPIS is for comparable data to be exchanged among participating countries, national compilers will receive

Box 5.3: Information Stored on the Registers of Statistics Canada and Singapore's Department of Statistics

Canada

Information relating to respondents

- Status of the respondent (in process, follow-up)
- Contact 1—Provider of the information
- Contact 2—Subject matter/end-investor
- Addresses (postal and e-mail), phone and fax numbers of the respondents and contacts

Response log details

- Detailed track record of the discussion with the respondents
- Follow-up dates (first and second date mailed received, etc.)

Other

- Codes of funds
- List of funds of the company
- List of funds by provider of information
- Fund type (international fund, retail funds, etc.)
- Sector of the funds (mutual fund, pension fund, insurance, segregated fund, banking, etc.)
- Submission format (Excel, ASCII, etc.)
- Manager of the fund
- Previous recorded value by fund (used to validate)
- Date of previous recorded value of fund
- Previous number of funds submitted

Singapore

Information relating to respondents

- Respondent identification code
- Registry of business number
- Respondent name
- Respondent address
- Respondent contract person/authorized person
- Designation of authorized person
- Telephone number of respondent
- Facsimile number of respondent
- Activity code of respondent (i.e., business sector of respondent)
- Commencement year of respondent's business
- Investment code of respondent (on record whether respondent is involved in overseas direct or portfolio investment or both, or no overseas investment)
- Financial period of respondent's business (i.e., accounting period)

Response log details

- Response status (accepted, liquidated, untraceable, dormant)
- Date mailed—automatically filled by computerized system
- Date received
- Date due
- Date of first and second follow-up
- Edit date—case edited

data on their residents' portfolio investment liabilities to nonresidents. Some broad checks on the data received—either by individual counterpart country or on a global basis (i.e., total liabilities to nonresidents)—should be possible. The following subsections focus on the various checks.

A. Quality Control Checks Through the Survey Form

5.33 The sooner errors are spotted and corrected, the better. For this reason, it is recommended that national compilers consider devising a survey form that explicitly includes quality-control checks or requires extra information that can be used as a consistency check. However, if extra information is required, it should be kept to the minimum necessary, and the national compiler should clearly explain the purpose for the collection of those additional data.

(i) Security-by-security survey forms

5.34 In its security-by-security collection from custodians, the United States found that respondents can make a number of errors. These errors include (i) failure to differentiate between long- and short-term securities as well as between securities issued by residents and securities issued by nonresidents; (ii) incorrect currency conversion of foreign currency securities into domestic currency; (iii) use of incorrect prices to arrive at market valuation; (iv) reporting of position date other than the survey date; and (v) problems relating to the reporting of asset-backed securities. Some respondents also reported holdings of debt instruments that had already matured by the survey's reference date.

5.35 A number of additional pieces of information can be requested on a security-by-security survey form to help address such reporting issues. They include the following:

- *The security number.* With the help of a securities database, the security number can help the national compiler to distinguish a domestic from a nonresident security and a long- from a short-term security and denote the currency of the security.
- *The quantity of securities held.* This information can allow the national compiler to derive the implicit market value of each individual security holding and help to detect direct investment relationships.
- *The face or nominal value of the (debt) security.* This again is a check on the implicit price valuation in the report and may highlight securities for which survey respondents are unable to provide market prices.

(ii) Aggregate survey forms

5.36 On an aggregate survey form, a number of checks are possible. In the Australian system,

because positions and transactions data are gathered on the same survey form, the reconciliation is done directly by the respondent. But this is a system where collection of position data is ongoing. The national compiler of a first-time national survey might consider requesting that survey respondents provide the value of total security assets held or simply total assets held, against which the reported nonresident holdings could be compared. This would help to identify severe misreporting, such as reporting all security assets as nonresident.

5.37 It is recommended that simple computer-checking procedures be written to process reported aggregate data. For instance, a computer check could be written that sums the individual country data and compares them with the reported total holdings; the difference should be zero. Likewise, a check could be written that highlights zeros or data above a certain size so that any unusual figures can immediately be brought to the national compiler's attention. Many other similar routine checks can be devised.

5.38 More generally, the national compiler could require a senior official of the responding entity to certify that the information provided is complete and accurate; this could help to ensure the data quality and punctuality. Similarly, requesting the name of a contact person helps to ensure that follow-up inquiries are dealt with efficiently.

B. Quality-Control Checks Against Other Reported Data

5.39 Different possibilities exist for checking data against other reported data, especially for assets of financial intermediaries like banks or investment companies, both at the level of the individual respondent and the aggregated level. These financial intermediaries might report separately statistics on portfolio investment position data for supervisory or statistical requirements. Some examples are given below. Verification of the basis for valuation of the assets needs to be ascertained because valuation principles for these other sources may not be at market price. Moreover, it is also necessary to ensure that the data are provided on the residence basis required for the CPIS (as well as the balance of payments and the IIP), since some data sources may be on the entity's global consolidated balance sheet, not just the balance sheet for the domestic economy. It is important to ascertain that the reporting unit is the same and that there is no double counting; for example, one unit within an

enterprise group does not report if there is a consolidated report for the whole domestic group.

(i) Central bank (monetary authorities)

5.40 As noted in Chapter 1, the IMF Committee was of the view that reserve assets should be shown separately in global totals and not as part of a country's portfolio investment. Accordingly, a geographical breakdown of securities included in reserves will be collected separately by the IMF in a confidential survey, SEFER (see Chapter 2, Section III).

(ii) Banks

5.41 Position data on investment in securities issued by nonresidents are included in the banking statistics and balance sheets. Furthermore, many reporting central banks provide the Bank for International Settlements (BIS) with information on their commercial banks' investment in securities issued by nonresidents, including a breakdown by country of issuer and by major currency. However, it should be borne in mind when comparing survey results with banking data that the banking data may have been collected for other statistical or other (e.g., supervisory) purposes and that some banks may not record (all) their holdings of securities assets at market prices, especially those held in the "investment account"⁵⁹ (which may be held for reserve or capital requirement purposes and be recorded on a different valuation basis).

(iii) Insurance companies and pension funds

5.42 Position data on investment in securities issued by nonresidents should be included on the balance sheets of insurance companies and pension funds. However, when undertaking these types of checks, it is important to remember that definitions of terms may differ according to purpose. For example, for pension funds in the United States, securities issued by nonresidents but trading on U.S. securities markets are categorized as "U.S. securities."

(iv) Investment companies

5.43 Position data on investment in securities issued by nonresidents should be included on the balance sheets of investment companies; in addition, the

⁵⁹As opposed to the "trading book," which is usually marked to market prices on a regular basis.

Table 5.2: Computer Packages Used to Process the 1997 CPIS Results

Countries	Commercial spreadsheet program	Relational database management system	Personal database management system	Large relational database management system	Time-series (temporal) database management system	Was this package already available?	If package was not already available, why was this one chosen?
Argentina	X					X	
Australia	X			X		X	
Austria	X			X		X	
Belgium			X			X	
Bermuda	X					X	
Canada		X				X	
Chile	X	X	X	X	X	X	
Denmark	X		X			X	
Finland	X					X	
France				X		X	
Iceland	X					X	
Indonesia	X					X	
Ireland	X	X				X	
Israel					X	X	
Italy		X				X	
Japan	X			X		X	
Korea	X					X	
Malaysia				X		X	
Netherlands	X			X		X	
New Zealand	X	X				X	
Norway	X		X			X	
Portugal	X		X			X ¹	
Singapore		X				X ²	
Spain				X		X	
Sweden			X				³
Thailand	X			X		X	
United Kingdom	X	X ⁴			X ⁵	X	
United States	X	X	X	X		X ⁶	
Venezuela	X					X	

Note: Canada, Ireland, and Israel subsequently moved, or are planning to move, to relational databases.

¹ Although these packages were already available, they were adapted to meet the needs of the users.

² Modified from the package developed for previous surveys.

³ A process and data input system was constructed in SAS.

⁴ Database for nonbank institutions.

⁵ U.K. banking data held on Bank of England's own time-series database.

⁶ Extensive programming was also done in conjunction with a large relational database.

geographical allocation of the individual investment funds may be estimated through knowledge of their published investment strategy.

(v) Nonfinancial economic sectors (such as companies or households)

5.44 Position data on investment in securities issued by nonresidents could be included in corporate balance sheets, but it might be difficult to confirm the data for nonfinancial sectors.

5.45 For those countries where there are no balance of payments transaction data (and, therefore, where the range of analytical checks that can be conducted is limited; see next section), attribution of investments by sector and a comparison with available sec-

tor data, as outlined above, is probably the best check that can be made.

C. Quality Control Through Analytical Checks

5.46 The degree to which analytical checks can be developed depends on the availability of comparable data. If data are available, the following checks can be devised.

- If stock data and flow data are independently assembled, an attempt should be made to reconcile these data. To do so requires consideration of effects caused by different prices, exchange rates, other adjustments like write-offs, or thresholds. Checks can be applied at the individual respondent and aggregate data levels. However, it should be noted that some reconciliation may not be possible,

depending on data sources. For example, transaction data may be reported by securities dealers, which could involve some securities sold to non-resident custodians. In that case, these securities are unlikely to be recorded if the survey focuses on resident custodians.

- In countries where transaction data are available and the position data are being produced for the first time after a lapse of a number of years, an attempt could be made to reconcile position data that were estimated by accumulating transaction data with reported position data. The method of calculating position data from transaction data is described in paragraphs 740–743 of the IMF’s *Balance of Payments Compilation Guide* (Washington, 1995). The degree of deviation of the cumulated transaction and reported position data could depend on the composition of the holdings, the variability of the relevant exchange rates and market prices of securities, and the length of time over which transactions have been cumulated as well as net errors and omissions in the reporting systems. However, if the national compiler judges the discrepancy to be significant, it should be investigated. Given the number of assumptions and potential time frame of observations, this check is probably more appropriate for aggregate data, although it could be developed for checking individual respondent’s data. The more frequent the surveys of positions, the more reliable the reconciliation.

5.47 One important piece of information required to develop these analytical checks is the currency composition of the portfolio assets, without which the currency and security price revaluations are, at best, an estimate. Therefore, the national compiler might ask survey respondents to provide a breakdown of investments by currency—although this is not a mandatory requirement of the CPIS. As a second-best option, the national compiler might use data on the currency composition of holdings provided by different financial intermediaries (e.g., banks) as a proxy for the currency composition of all survey respondents’ holdings.

5.48 Some compilers will face problems, particularly when checking data for claims vis-à-vis individual countries, if their transactions data are based on the “transactor” principle, as opposed to the debtor/creditor principle used for position data (see *BPM5*, paragraphs 484–488). In other words, it might not be possible to reconcile cumulated transaction data with the position data from the national survey because different principles of geographic allocation are being used.

D. Quality Control from the Viewpoint of the Recipient (Debtor) Country

5.49 Because comparable data are to be exchanged among participating countries (subject to confidentiality constraints), national compilers will receive data on their residents’ securitized liabilities to nonresidents. Although quality control is primarily the responsibility of the national compiler in the creditor country, the recipient compiler could be in the position to check the data received. Checks could be carried out on data vis-à-vis a single counterpart (creditor) country or on data vis-à-vis a group of reporting countries.

5.50 Regarding individual counterpart countries, the recipient compiler (debtor country) could check the data received to

- compare the data with those previously published. At present, several countries (e.g., the Netherlands) publish data on their investment in securities issued by nonresidents, which can be used as an approximated range for the position data at end-December 2001 (and beyond, in the event that the survey is repeated or undertaken on a regular basis);
- use information about interest payments vis-à-vis single counterpart countries. From these data, the country attribution of the outstanding volume of domestic securities could be estimated. However, care is needed with this check because the residence of recipients of interest payments on bearer securities may itself be estimated; and
- use data published in the BIS statistics on banks’ investments in securities issued by nonresidents. These data give a partial picture of nonresident investment in domestic securities. If information is available on the banks’ percentage share of total holdings of securities issued by nonresidents in the creditor economies, some estimate of the country attribution of the nonresident investment in domestic securities could be made from the partial BIS data.

5.51 Each of the aforementioned estimation methods is only a broad check. Moreover, because many data sources (e.g., the balance of payments, possibly the IIP, and some counterparty country liabilities) are derived from the transactor basis, it is not uncommon for the bilateral data to be misleading when compared with data sources (such as the CPIS) that are constructed on the creditor/debtor principle. Nonetheless, these estimates could provide the recipient compiler with a benchmark against which to judge the data received.

5.52 It is also possible to devise checks for the liabilities data. Nonresident investment in domestic securities could be estimated by residual; that is, the outstanding volume of equity and long-term debt securities issued by residents, adjusted for residents' investments and compared against the aggregate data received. Data on the outstanding volume of domestic securities issued could be available from domestic or international publica-

tions. Residents' holdings of resident securities may be published by the domestic statistical agency within the framework of the flow of funds and financial assets and liabilities balances outstanding. However, the compilation and estimation techniques used for flow of funds and financial asset and liability balances outstanding should be explored thoroughly to ensure that these methods would produce sufficiently robust results.