TECHNICAL NOTES AND MANUALS

Direct Reporting of Private Sector Cross-Border Financial Flows and Stocks in Selected African Countries

Prepared by
Simon Quin, Kenneth Egesa, and Howard Murad

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Author's E-Mail Address:	Simonquin42@hotmail.com

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ACRONYMS

BOP	Balance of Payments
BPM5	*Balance of Payments Manual,* fifth edition
BPM6	*Balance of Payments and International Investment Position Manual,* Sixth edition
BPM6CG	*IMF BPM6 Compilation Guide*
BOG	Bank of Ghana
CBN	Central Bank of Nigeria
CDIS	IMF Coordinated Direct Investment Survey
CDISG	*IMF Coordinated Direct Investment Survey Guide*
CPIS	IMF Coordinated Portfolio Investment Survey
CPISG	*IMF Coordinated Portfolio Investment Survey Guide*
DFI	Development Finance International
DFID	United Kingdom Department for International Development
EDDI	IMF/DFID Enhanced Data Dissemination Initiative
FALS	Foreign Assets and Liabilities Survey
FIS	Foreign Investment Survey
FPC-CBP	Foreign Private Capital Capacity Building Project
FPCS	Foreign Private Capital Survey
GBCs	Global Business Companies
GBC1s	Global Business Companies with License 1
GBC2s	Global Business Companies with License 2
GDDS	IMF General Data Dissemination System
GSS	Ghana Statistical Service
IIP	International Investment Position
IMF	International Monetary Fund
IT	Information Technology
ITRS	International Transactions Reporting System
JVCs	Joint Venture Companies
KNBS	Kenya National Bureau of Statistics
MEFMI	Macroeconomic and Financial Management Institute of Eastern and Southern Africa
PCFS	Private Capital Flows Survey
SDDS	IMF Special Data Dissemination System
SOFAL	Survey of Foreign Assets and Liabilities
STATCAP	World Bank Statistical Capacity Building Project

Direct Reporting of Private Sector Cross-Border Financial Flows and Stocks in Selected African Countries

Simon Quin, Kenneth Egesa, and Howard Murad

Private cross-border financial flows and stocks have grown to account for an increasingly significant part of overall transactions and positions in many African countries. Direct reporting through enterprise surveys has become a key data source to enable these flows and stocks to be measured accurately. This paper describes a multi-year IMF technical assistance project to establish direct reporting in six African countries (The Gambia, Ghana, Kenya, Mauritius, Mozambique, and Nigeria). Annual enterprise surveys are now established in all six countries with secured internal funding, and the survey results have been incorporated to varying degrees into the balance of payments and International Investment Position statistics. The paper describes the step-by-step advice that was provided to the countries and the lessons learned as the advice was adapted to their particular situations. It is hoped that these case studies will serve as a useful reference for other countries embarking on efforts to establish direct reporting of cross-border financial flows and stocks.

I. Introduction[1]

Direct reporting through business survey of private sector cross-border financial flows and stocks can serve to replace poorer quality existing data sources used in compiling the balance of payments (BOP) financial account. It can also serve as the primary data source for compiling the related international investment position (IIP). Direct reporting is becoming increasingly important in many African countries not only because of existing data sources but also because of a growing interest in private sector vulnerability to changes in global and domestic financial markets, including the widespread adoption of floating exchange rates by developing economies. This paper describes the experience from a multi-year IMF technical assistance project that has focused on assisting six African countries (The Gambia, Ghana, Kenya, Mauritius, Mozambique, and Nigeria) to establish such direct reporting, the step-by-step advice that was provided to these countries, and lessons learned as the advice was adapted to the particular situations in each country. It is hoped that these studies will

[1] The three authors are experts employed by the Balance of Payments Division, IMF Statistics Department, to provide relevant technical assistance to the countries of focus in this paper. The paper benefitted from the review and comments of Armida San Jose, Ralph Kozlow, Florina Tanase, Silvia Matei, Emma Angulo, Cornelia Hammer, Alicia Hierro, and Thomas Morrison.

be useful for other countries that have not yet started or are only beginning to start direct reporting.

The Enhanced Data Dissemination Initiative (EDDI) is a five-year project (2010–2015) to improve macroeconomic statistics in African countries. It is being implemented by the IMF and financed by the U.K. Department of International Development (DFID). The external sector module of EDDI is focused on assisting six countries in establishing direct reporting of cross-border financial flows and stocks as a reliable data source and in using these new data for producing IIP and related BOP statistics. By the end of the third year of EDDI, the participating countries had already achieved the following objectives:

- All six countries have successfully conducted annual enterprise surveys and established databases on private sector cross-border financial flows and stocks.
- All six countries have secured annual internal funding for these surveys.
- An annual IIP based mainly on direct reporting is now compiled by Ghana, Mozambique and Mauritius and is published by the IMF in *International Financial Statistics* and the *Balance of Payments Statistics Yearbook* and Kenya is close to being able to do this. The Gambia and Nigeria have produced trial IIP statements based on direct reporting.
- Ghana has integrated its annual IIP based on direct reporting with its BOP financial account in which changes in the IIP can be explained in terms of transactions, revaluations, and other volume changes.

The technical assistance advice and training provided to the six countries were consistent with the sixth edition of the *Balance of Payments and International Investment Position Manual* (*BPM6*) and the *Balance of Payments and International Investment Position Compilation Guide (BPM6CG)*.[2] This report draws on the best practices in BOP compilation as reported in the draft *BPM6CG* by providing an account of their implementation and adaptation to the particular situations in the participating countries.

Part II reports on the project's progress and results thus far, highlighting the experiences of the six countries both in terms of their similarities and their differences. Part III draw from the project's experience in applying the best practices contained in the draft *BPM6CG* with respect to the two main initial tasks of the project, which are the successful establishment of an annual enterprise survey and the development of data sources for compiling portfolio investment. Step by step guidance is provided for the various processes required, such as establishment of the survey frame, questionnaire design, data collection, data review and

[2] In practice, use was made of the *Balance of Payments Compilation Guide, 1995,* which was produced in support of the fifth edition of the *Balance of Payments Manual (BPM5)*, and draft chapters (released in 2012) of the *BPM6CG*, which was produced in support of *BPM6*. All subsequent references in this note are to the draft *BPM6CG* (www.imf.org/external/pubs/ft/bop/2007/bop6comp.htm).

validation, design of the database, and the use of grossing up techniques. The paper is intended to be of use for other countries in the region that have a similar need to upgrade their BOP/IIP statistics. Part IV provides a detailed case study that focuses on the lessons from Ghana's successful experience. Part V provides a summary of conclusions.

II. Project Design and Implementation

A. Introduction and Background

The IMF/DFID EDDI is intended to build on the widespread participation of African countries in the IMF's General Data Dissemination System (GDDS), which provides a framework for documenting metadata and plans for improvement in both methodology and data sources, as stepping stones for a focused effort to improve data dissemination. For the external sector, the core dissemination framework of the GDDS comprises the main aggregates and balances of an annual BOP statement that are published within 6–9 months of the reference date. As an encouraged extension, an opening and closing annual IIP statement, fully integrated with the annual BOP statement, is also proposed with the same timeliness requirement.[3]

The importance of the GDDS is highlighted by the fact that, for many countries in the region, there has been an increased unreliability of data reported under foreign exchange transactions reporting systems (International Transactions Reporting Systems (ITRS)). For many countries, ITRS is their principal data source in an environment of relaxed exchange controls. Budgetary constraints have inhibited the development of new data sources in support of BOP compilation, such as direct reporting by enterprises. More recently, there has been a growing awareness of the need for IIP data to assess issues of vulnerability in the private sector, the value of which is greatly enhanced if the sources permit the full integration of BOP financial account flows with IIP opening and closing stocks.

The countries targeted by the EDDI project (and its predecessor GDDS project) were all countries that lacked data sources to support the compilation of an annual IIP statement. All had earlier established ITRS reporting systems as their principal data source for BOP compilation. By the time of the EDDI project, one participating country (Mozambique) retained partial capital controls and another participant country (The Gambia) had discontinued ITRS reporting as a BOP data source. Most had introduced voluntary ITRS reporting by banks that was largely unsupervised by the compiling agency (Ghana, Kenya, Mauritius, and Nigeria). For these countries, report forms had been designed by the BOP compiling agency that were broadly consistent with the classifications of the fifth edition of the *Balance of Payments Manual* (*BPM5*). However, with the exception of Mauritius, the

[3] In the project design, the GDDS data dimensions as they were at the time the project was established were followed. Thus far, only some of the participating countries have started to make progress with quarterly enterprise surveys, which may not be achieved within the project timeframe.

resulting detailed classifications provided by banks have been unreliable and substantial residual flows are frequently reported in both the current and financial accounts. Nonetheless, the assumption that the resulting data provide a broad picture of current and financial account transactions that are driving changes in the exchange rate and serve as a useful first estimate of the BOP accounts has increasingly been brought into doubt.

Given increasing concern about a lack of reliable data sources, the focus of technical assistance in Africa was initially on funding large frame multi-stakeholder enterprise surveys in which consultants were employed in helping to establish the survey frame, questionnaire design, procedures for data review, and the development of appropriate data management and report writing software. In participating countries, a series of 3–4 surveys were undertaken with a view to transferring ownership of the survey to the BOP compiling agency by the close of the project.[4] The sustainability of such projects required that, upon project completion, increased resources are committed to BOP compilation by the compiling agency that are sufficient to conduct regular enterprise surveys on a standalone basis and that sufficient institutional memory is created in the compiling agency to enable it to conduct future enterprise surveys. Consequently, the ability of countries to sustain large-scale surveys has proved extremely difficult.

B. EDDI Project Design and Methodology

The view taken in the design of the EDDI project was that smaller survey frames are appropriate from the outset given the budget constraints faced and the expectation that in Africa the distribution of enterprises with access to foreign funding or having subsidiaries/affiliates abroad is likely to be highly skewed. As a result, the resulting frames for annual enterprise surveys have been less than 400.

The widespread success of this approach, combined with the demonstration effect on other countries, has resulted in many BOP compiling agencies in the region conducting enterprise surveys without resort to external funding. Some of these countries are participating in the Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI)'s Foreign Private Capital Capacity Building Program (FPC-CBP), which provides participating countries with the survey questionnaire together with online access to a supporting database, and provides technical assistance through workshops and seminars.[5]

[4] Many of these surveys were funded by DFID and conducted by Development Finance International (DFI). The last of the DFI surveys was in The Gambia and was completed in 2009 prior to The Gambia's participation in the EDDI project.

[5] At the start of the EDDI project, the following countries in Africa were undertaking enterprise surveys to collect data on cross-border financial flows and stocks: Botswana, The Gambia, Lesotho, Malawi, Namibia, Uganda, Swaziland, Rwanda, Tanzania, and Zambia. In the course of the EDDI project, Ghana, Kenya, Mauritius, Mozambique, and Nigeria have all commenced such surveys.

These developments provided a setting for establishing the objectives of the EDDI project. All six countries participating in the EDDI project (The Gambia, Ghana, Kenya, Mauritius, Mozambique, and Nigeria) were expected to conduct an annual enterprise survey of cross-border financial flows and stocks that would meet the GDDS dissemination standard.[6] If feasible, a quarterly enterprise survey would also be introduced as a key data source for compiling a quarterly BOP statement as well as contribute to a first estimate of an annual BOP statement. Other forms of direct reporting would be introduced as needed (such as reporting by the local stock exchange of inward portfolio investment) with the outcome that ITRS data would only be used selectively for the BOP financial account. With the exception of Kenya, no external funding was envisaged as the necessary funding and resources were to be provided by the compiling agency (the central bank in all countries except in Kenya), and full use was to be made of available synergies (such as the capacity to develop an in-house database in support of the enterprise survey using appropriate data management software).[7]

The design of the EDDI project focused on the following key phases in conducting an enterprise survey. Their implementation and lessons learned from the implementation of these key phases in the six participating countries constitute the main subject of this paper.

- Establishment of a survey frame;
- Questionnaire design;
- Data collection;
- Data review and validation;
- Design of the database; and
- Grossing up techniques.

Following the publication of *BPM6* in 2009 and the *Coordinated Direct Investment Survey Guide* in March 2010, the EDDI project began in April 2010. The project's design was thus able to integrate fully the new methodologies from the beginning. With the exception of The Gambia, all countries participating in the EDDI project agreed to participate in the Coordinated Direct Investment Survey (CDIS). Priority was given by the EDDI project to participation in the CDIS because the CDIS database (posted on the IMF external website) provides access to partner country data for inward direct investment compiled on a comparable basis. Emphasis was given to inward direct investment because of its critical contribution to growth, output, value added, and employment in the countries participating

[6] In this paper, such surveys are called Private Capital Flows Surveys (PCFS) although they may appear under various names in the countries themselves and in the country specific sections of this paper.

[7] The project for Kenya was slightly different in that external funding for an enterprise survey was to be provided under a World Bank Statistics Capacity Building Program (STATCAP) to the BOP compiling agency, the Kenya National Bureau of Statistics (KNBS). The success of the EDDI project was therefore dependent on the KNBS allocating sufficient resources to BOP compilation and having the capacity to conduct future surveys without resort to external funding.

in the EDDI project, its provision of a vehicle for the transfer of expertise and technology, and because direct investment is regarded as a source of less volatile external finance than is commonly the case for portfolio and other investment. For inward direct investment, the *Coordinated Direct Investment Survey Guide* requested: (i) the application of the *Framework for Direct Investment Relationships* for the identification of fellow enterprises (enterprises which have a common direct investor with the reporting enterprise but which do not hold 10 percent or more equity in each other); (ii) the reporting by counterpart country of the immediate direct investor; (iii) the reporting of reverse investment (claims in the form of equity or debt of the direct investment enterprise on its nonresident direct investor abroad); and (iv) a change from *BPM5* to *BPM6* in the calculation of direct investment (debt between selected affiliated financial corporations is not classified as direct investment).

In addition to providing a framework for reporting inward direct investment, the *Coordinated Direct Investment Survey Guide* also provides model survey forms for reporting inward and outward direct investment, and all functional categories in the IIP. In practice, as countries in the EDDI project each chose to undertake a survey of all enterprises that met a threshold of foreign liabilities and assets, their questionnaires cover all cross-border financial flows and stocks, including both inward and outward direct investment, together with all other investment.[8] Nonetheless, there has been variation in the design of questionnaires by individual countries with some (such as Mauritius) meeting the full CDIS requirements for direct investment abroad (by the inclusion of fellow enterprises and reverse transactions). In addition, Mauritius addressed some of the more challenging issues in reporting direct investment abroad, such as the use of data provided by individual subsidiaries/affiliates abroad for the components of shareholders' capital and income that are needed to produce aggregated data that ensure that the stock of direct investment in equity abroad is fully reported. Although the questionnaires currently implemented are broadly the same, there are differences in their design.

Other changes in *BPM6* that affect the financial account are reflected in the preferred instrument presentation of claims on and liabilities to unrelated nonresidents. These comprise equity securities, other equity, debt securities, currency and deposits, loans, trade credit and advances, other accounts receivable/payable, insurance, pension, and standardized guarantees, and financial derivatives and employee stock options, and Special Drawing Rights. In conjunction with this instrument classification, *BPM6* also requires a more detailed classification of the financial sector to include pension funds, insurance corporations, money market funds, investment funds, and other financial intermediaries. This has implications for the design of specialized questionnaires for each of these sub-sectors which have not been addressed thus far in the EDDI project.

[8] For Nigeria, the 2010 PCFS used the CDIS questionnaire for inward direct investment, which was changed to a questionnaire covering all cross-border financial flows and stocks for the 2011 PCFS.

Of these, the main changes compared with *BPM5* are the inclusion of standardized guarantees and stock options, which are currently excluded from the instrument classification as they are considered to be unlikely to result in cross-border financial claims or liabilities in the region. For the insurance industry, *BPM6* provides a more systematic derivation of services, investment income, transfers, and investment that calls for the introduction of specialized surveys. For the most part, these have not yet been introduced, as most insurance companies in the region have little business with nonresidents except in the case of reinsurance services.

For financial derivatives, although *BPM6* follows closely *BPM5* and its subsequent revisions, these instruments were not included in earlier versions of survey questionnaires in the region either because the use of financial derivatives was confined to a few banks and some major non-bank corporations and/or because there were no clearly established accounting standards in the region regarding the treatment of financial derivatives. For the EDDI project, the initial focus has been on establishing how widespread is the practice of using cross-border financial derivative instruments to hedge against risk and on how they are treated in company financial accounts. For banks engaged in cross-border forwards and swaps, the reporting system followed by the Bank of Uganda has been followed by some countries participating in the EDDI project (such as Ghana) by aggregating data based on individual contracts between resident banks and nonresidents.

Of relevance to the BOP financial account also is the adoption by *BPM6* of a concept of residence that clearly includes corporate structures with little or no physical presence in the reporting economy. This has had major relevance for the Mauritius EDDI project that required an entirely separate enterprise survey for global business companies that are incorporated in Mauritius. Other topics raised by the conversion to *BPM6* may not have implications for the financial account, but are relevant if direct reporting is to be extended to cover services and income. These include the treatment of fees paid on goods for processing (as services rather than as goods), merchanting (as goods rather than services), and financial services indirectly measured (as services rather than income). The reporting of these transactions is included in the EDDI project once the primary goal of establishing direct reporting of all private sector cross-border financing is accomplished.

C. Implementation of EDDI Project

This section discusses the experience of countries in the EDDI project in establishing an annual enterprise survey of cross-border financial flows and stocks.

Annual Enterprise Survey of Cross Border Financial Flows and Stocks

The establishment of a **survey frame** for an annual enterprise survey of cross-border financial flows and stocks is a core requirement of the EDDI project. Its success is critical to the establishment of direct reporting for all BOP financial account transactions and to the generation of comparable data for the private sector IIP that give a fully integrated picture of opening stocks, transactions, price and exchange rate changes, other volume changes, and closing stocks. Most countries in the region are now conducting such surveys funded under their regular budget (i.e., without external support). From this experience, a number of critical lessons have been learned, which are addressed in the wider context of best practices in Part III. These are lessons in establishing a survey frame, questionnaire design, data collection and review, and the design of grossing up techniques to ensure that comparable data are produced across years.

The survey frames were mainly put together by including all listed companies and consulting with the main industry associations and relevant government and public sector bodies (such as for mining, oil and gas, the regulated parts of the non-bank financial sector, investment agencies, and social security funds). In some cases, an exploratory survey module was added to existing large frame enterprise surveys conducted for other statistical purposes. The result has been that all enterprises that met a threshold of foreign assets and liabilities were included in the annual private capital flows enterprise surveys that have been conducted thus far in the project. The scope for running annual surveys with periodic larger frames and with smaller frames for intervening years has not yet been explored. The establishment of close working relationships by BOP compilers with industry associations, the local stock exchange for listed companies and key major enterprises has also prompted increased use of email communication and has resulted in initiatives to establish electronic reporting by some enterprises, although these are at an early stage of development. In the case of Mauritius, the survey frame has benefited from the use of ITRS data to identify enterprises for which banks have reported large inflows of direct investment (equity and debt).

For most of the countries participating in the EDDI project, a census of enterprises reporting cross-border financial flows and stocks is now established covering all private enterprises that meet some threshold of foreign liabilities/assets. As discussed in paragraph 54, some participating countries have selectively included public corporations. For three countries (Kenya, Mauritius, and Nigeria) more work is required to finalize such a survey frame, which in the case of Mauritius, will involve an exploratory survey to be included in censuses of small and large establishments by Statistics Mauritius in 2013 and 2014. This should not result in a delay in achieving the EDDI project objectives, as the project does not have to start with a large frame survey, but can recast the results using appropriate grossing up techniques should a large frame survey be conducted at a later stage. Thus, a large frame survey has still to be conducted by Kenya, Mauritius, and Nigeria.

The **design of questionnaires** in earlier enterprise surveys conducted in Africa with external funding was typically intended to meet the need of various local stakeholders including those of the BOP compilers. Apart from the BOP compilers, these needs of other local stakeholders commonly included (i) data on sales, employment, production, and compensation and (ii) data on investor perceptions. In most cases the data on sales, employment, production, and compensation were intended to support reports on the contribution of the private sector to the economy and reporting by direct investment enterprises that meets the needs of Foreign Affiliates Trade Statistics.[9]

For the countries participating in the EDDI project, some have followed more or less the same set of requirements and some have limited the questionnaire to the requirements of the BOP/IIP. The principal focus of the EDDI project has been on the design of the BOP/IIP module of a multi-purpose enterprise survey or the design of a stand-alone BOP/IIP survey. Initially, questionnaire design for the BOP/IIP module was based on the *1995 Balance of Payments Compilation Guide*, and subsequently changed to reflect the requirements of *BPM6* by taking into account the model report forms for reporting direct investment in the *Coordinated Direct Investment Survey Guide G*. In practice, the EDDI project has built on the model report form for reporting direct investment. Thus, if a country wishes to conduct an enterprise survey of all BOP financial account flows and stocks for a frame comprising all enterprises that meet some threshold by size of foreign liabilities/assets, it could first identify those enterprises within the survey frame that are direct investment enterprises and those which are not. Direct investment enterprises could then be asked to complete Part I of the questionnaire (which is the report form for direct investment included in the draft *BPM6CG*). All other enterprises would be asked to complete Part II, which is designed to meet the requirements of *BPM6* for other investment.

In practice there has been some variation in the questionnaires that have resulted, but all of them are designed to support an enterprise survey that will collect data on cross-border financial flows and stocks with regard to both inward investment and outward investment that meets the requirements of *BPM6*. Ghana, Kenya, and Mozambique all chose questionnaires based on the Bank of Uganda questionnaire, which was taken as an example of a working questionnaire currently in use in the region. In addition to covering cross-border financial flows and stocks, two countries (Kenya and Ghana) have also included services credits and debits in the questionnaire. For all countries, because of deficiencies in the reporting of financial account transactions, data are also requested on the currency composition of external debt to permit the calculation of net transactions for each category of external debt.

All the current questionnaires are in continuous review to ensure the implementation of *BPM6* instrument classifications. These include the addition of financial derivatives as a separate instrument component together with other *BPM6* instrument classifications discussed in Part III.

Because of poor lines of electronic communication and the unreliability of mailed out surveys, most countries have resorted to the use of enumerators for **data collection** (i.e., to

[9] Foreign Affiliates Trade Statistics and the closely related statistics on the Activities of Multinational Enterprises are treated in *BPM6* as satellite accounts.

deliver questionnaires to enterprises and to collect them when completed). These approaches, although mostly effective in securing a response, are costly and initial efforts also suffered from poor response because of deficiencies in the survey frame (such as wrong addresses or false assumptions that a selected enterprise had significant foreign liabilities/assets). In some cases, an initial large frame enterprise survey served as a costly way of conducting an exploratory survey that served to benefit subsequent enterprise surveys and the completion of the business register. This outcome was partly anticipated in that the most successful approach was to fund and conduct a cycle of enterprise surveys that facilitated a learning process for both the compiling agency and the responding enterprises. This was so for enterprise surveys conducted under the EDDI project as well as for earlier, largely foreign financed, cycles of enterprise surveys.

For all the EDDI participating countries, **survey response** has improved with successive surveys. Pre-survey sensitization meetings have helped in this regard as well as the publication of reports on the outcome of surveys. Survey response is currently running at over 70 percent for most countries, though many have had individual major enterprises that have been reluctant to respond. Because of the asymmetric distribution that usually characterizes such surveys in Africa, all participating countries are required to ensure that major enterprises complete the questionnaire or at least provide a financial statement. As a result, response by enterprises in this group has been higher than the average.

Considerable effort has to be given to establishing best practices for **data review**. These comprise internal review checks that are built into the questionnaire, checks against previous survey responses, and checks against enterprises financial statements and/or annual reports to shareholders. For countries participating in the EDDI project, these initially focused on ensuring that the latest enterprise financial statement and/or annual report to shareholders was enclosed together with the completed questionnaire. Expertise has since been built up on how to use information in enterprise financial statements to verify data reported in the completed questionnaires, on which BOP compilers now have a list of checks, and has also resulted in changes to questionnaire design. This process has also facilitated a dialogue between the accounting staff in enterprises and BOP compilers with mutual benefit now that surveys are conducted on an annual basis.

As a result, on the inward side the accuracy of data is probably highest for direct investment in the form of equity (both stocks and flows) given the close correspondence between the book values reported in enterprise balance sheet accounts and the requirements of BOP/IIP, and likewise for data for income and its distribution. The accuracy of data for the instrument breakdown of external debt may be less reliable as such breakdowns by type of debt instrument are not normally required by enterprises for the purpose of reporting to shareholders, and in many cases neither is the resident/nonresident split. Nonetheless, major external funding is usually reported in the notes to financial statements and these have served to identify any egregious misreporting in completed questionnaires. For inward portfolio investment, it is apparent that a distinction needs to be made between listed companies and unlisted companies (recommended by *BPM6*), since for listed companies there are better data sources for nonresidents' purchases and sales of securities, and the value of their holdings at market prices are likely to be found in reporting by the local stock exchange. For portfolio equity investment in unlisted companies, practice is currently to report the value of such holdings in terms of book values of shareholders equity, given that enterprises have this information readily available. It is also apparent that for unincorporated businesses the distinction between direct and portfolio investment may be uncertain, but, as a general rule, inward portfolio investment in unlisted companies is small which therefore limits the possibility of misreporting.

On the outward direct investment side, the tasks for data review have proved to be much greater, largely because reliable data for shareholders capital have to be built up from the accounts of each subsidiary/affiliate abroad. Beyond that, the survey frame for an outward investment survey is likely to be small, given its limitation to direct investors, which should make it easier to assemble. In practice, some countries were not meticulous in ensuring that the relevant parts of the financial sector are included in the survey frame. This issue has since been addressed. As with inward investment, the accuracy of data for the instrument breakdown of holdings of external debt instruments may be a little less reliable as such breakdowns are not normally required by enterprises for the purpose of reporting to shareholders. Nonetheless, where financial statements have been provided, information on assets in the form of debt instruments with related enterprises abroad has been extracted from the notes to financial statements.

Notwithstanding efforts made to build internal checks into the questionnaire and to develop cross-checks against enterprises financial statements and/or annual reports to shareholders, the process of data review is greatly enhanced if the database is designed to facilitate scrolling through the data on an enterprise by enterprise basis, looking for gaps and outliers that have escaped the review process. In addition, data review is facilitated if the database is designed to enable comparison of previous survey responses to ensure consistency in the reporting of stocks. The use of tables intended to facilitate this review is critical to the present phase of the EDDI project.

The requirements for the **design of a database** in support of an annual enterprise survey of cross-border financial flows and stocks are that it should facilitate (i) the compilation of BOP/IIP aggregates including the needs of the CDIS; (ii) the generation of data review tables that permit the scanning of reported data on an enterprise-by-enterprise basis for gaps and outliers both for a particular survey and across surveys; (iii) the design and implementation of grossing up techniques that ensure that a consistent set of BOP/IIP data is generated over a desired period; and (iv) the generation of output tables needed to support the analysis of results, including both a set menu of tables and the facility to construct additional tables as needed. Without suitable software that supports these requirements, the full benefits from using appropriate information technology to complete rapidly and efficiently the tasks of data capture, processing, and review may not be realized.

In practice, most of the BOP compiling agencies participating in the EDDI project now have the capability to establish such data management software, as is evident from the experience of the Bank of Uganda, which has served as a model for the EDDI project in managing annual enterprise surveys of cross-border financial flows and stocks. In the course of the EDDI project, one other country (Ghana) has developed such a database and others (Kenya, Mauritius, Nigeria) appear to have the in-house capability to do so in support of their annual enterprise surveys and have taken initial steps to develop the appropriate data management software. An initiative by MEFMI has also developed such a database for countries participating in its FPC-CBP. For all countries, the default has been to establish a supporting database using spread sheet software. However, experience suggests that such software is best suited for small surveys with a limited menu of output tables and limited scope for data review.

At the present time, Ghana and Mauritius have developed in-house data management software to support their annual enterprise surveys. Nigeria and Mozambique are using spreadsheet software, and The Gambia is taking steps to do so. For its last enterprise survey, Kenya used the MEFMI capital flows database. In support of their 2013 enterprise survey, Kenya plans to have established its own database using similar data management software to that used in Uganda. Likewise, Nigeria has taken steps to develop an in-house database using data management software which is due to be implemented this year.[10] Overall, with the exception of The Gambia, the prospects are encouraging for the BOP compiling agencies in all the EDDI participating countries to take steps to establish databases for their annual enterprise surveys based on appropriate data management software that fully meet their needs. This reflects advances in the technical capabilities of their IT departments as well as the scope for sharing experience that the EDDI project affords. Experience with the EDDI project has shown that including IT staff in training workshops for compilers and managers has many benefits.

The need for **grossing up** arises when successive enterprise surveys have different survey frames, or when there are differential survey responses. Earlier experience with enterprise surveys in the region had been to conduct each survey on a standalone basis with its own database. This was especially so where spread sheet software was being used to aggregate the reported data. It has only been more recently where data bases have been developed using appropriate data management software where it is possible to bring the results of successive enterprise surveys into a single database. This then makes it possible to track the

[10] For Nigeria, by arrangement between the Central Bank of Nigeria and the Bank of Ghana (BOG), a team selected from this working group visited the BOG in June 2013 to learn from Ghana's experience in establishing a database in support of its PCFS using appropriate data management software.

data reported by a single enterprise across all years that have been reported, which may be particularly important where there are mergers and acquisitions. Grossing up techniques are also appropriate once a decision is made to revise existing data for periods prior to the first enterprise survey. The need for such techniques also arises if a decision is made to extend the revised BOP/IIP data resulting from annual enterprise surveys back through earlier years in order to provide a string of comparable data. The simplest grossing up techniques require that there are overlapping data between, say, one survey and the next, or between survey data and non-survey data previously used in BOP compilation. Thus far, a systematic attempt to do this has only been done by the EDDI project for Ghana in support of a major revision of published BOP and IIP data in 2011 that made full use of the annual enterprise surveys of cross-border financial flows and stocks conducted to date. Best practice in the use of grossing up techniques is discussed in Part III.

Quarterly Enterprise Surveys of Cross Border Financial Flows and Stocks

Quarterly enterprise surveys are envisaged for all countries participating in the EDDI project once annual enterprise surveys are fully established and producing reliable data. Their value is seen in producing a more current first estimate of the annual data (three months from the reference date) compared with twelve months and longer for the annual enterprise surveys conducted thus far (and even longer if one takes account of enterprise accounting years). In addition, all the EDDI participating countries would benefit from directly reported quarterly enterprise data that are consistent with the annual data.

In order to minimize the burden of conducting a quarterly enterprise survey, the basic plan for all countries is to select some 20 or so large companies from the annual enterprise survey frame that already report quarterly accounts to their shareholders, or have some quarterly management accounts. A modified questionnaire has been developed for Mauritius and Ghana that can be readily completed from available information and the quarterly survey would be conducted preferably on an electronic basis. The possibility of enlisting the assistance of the stock exchange/capital markets authorities for listed companies is also under consideration, as are trial quarterly enterprise surveys. The next step would be to assess how well the quarterly data track the annual data using appropriate grossing up techniques. If successful, this would result in a strengthening of the quarterly BOP/IIP and an enhanced ability to interpret changes in quarterly flows and stocks in a historical context. This should result in the establishment of press releases of quarterly BOP/IIP data, which is one of the dissemination objectives of the EDDI project.

For Mozambique the situation is slightly different as a quarterly enterprise survey had already been established to permit the addition of non-cash transactions that would supplement the ITRS. As already noted, because the Mozambique ITRS is conducted within the framework of exchange control regulations, their ITRS is considered to be more reliable than that of other participating countries. The objective of direct reporting in the case of Mozambique is therefore also different, being mainly focused on supporting an IIP statement and the reporting of non-cash BOP transactions. Even so, as the establishment of an annual enterprise survey based on accruals reporting that is closely linked to the accounting practices of reporting enterprises is still being developed in Mozambique, the results in terms of a revised annual BOP that is fully integrated within the IIP statement remains work in progress. For Mozambique, it may also be noted that the recent removal of some of the exchange control requirements has affected the quality of ITRS data. This may underscore the importance of developing direct reporting.

Other Direct Reporting

Once annual and quarterly enterprise surveys of cross-border financial flows and stocks are established, countries participating in the EDDI project are expected to explore the scope for introducing other direct reporting, including direct investment in real estate, and by adding questions on services and income (employee compensation) credits and debits to the survey questionnaires, all with a view to replacing previous data sources for these transactions (which for some countries will imply replacing the ITRS as the preferred data source for some transactions). For some industries (such as oil and gas), where there has been substantial investment from abroad, the need to do this may be particularly urgent if large errors and omissions arise from unreported services and employee compensation debits when the data from cross-border financial flows and stocks collected from enterprise surveys are entered in the BOP. One possible outcome is the development of industry specific questionnaires that attempt to cover these transactions. A related issue is the emergence of new export service industries for which industry specific enterprise questionnaires could be developed. This would be in addition to the established transportation surveys that all of the EDDI participating countries have.

As most of the EDDI participating countries have found, an enterprise survey is not usually the best data source for reporting inward portfolio investment in listed companies as it is usually limited to information from the shareholders register. As more reliable reporting of both transactions and positions is probably available from the local stock exchange/capital markets authority; such reporting has already been established by most countries in the EDDI project as the preferred BOP/IIP data source. Direct reporting by custodian banks has also been explored but not introduced partly because for those countries with ITRS reporting, there is already a substantial reporting burden on banks. This experience has drawn on the best practices of other countries in establishing direct reporting of portfolio investment, which are discussed in Part III.

For many countries in the region an important component of inward direct investment and to some extent direct investment abroad comprises the purchase and sale of real estate by nonresidents. For both Mauritius and Ghana, banks are involved in offering mortgages to nonresidents. Such investments are not covered by enterprise reporting of cross-border financial flows and stocks. Therefore, the development of separate data sources is required. These new data sources may vary in design from country to country, but they should take advantage where possible of regulatory sources and ITRS data. Another possible source is reporting by construction companies that specialize in building homes for nationals living and working abroad (and therefore deemed to be nonresident). A review of available data sources is envisaged for each of the EDDI country projects.

Source Data Changes

For all the EDDI participating countries dependent on reporting by banks of their purchases and sales of foreign exchange with residents in a regime of loosened capital controls (Kenya, Ghana, Mauritius, Nigeria), there are significant risks of misclassification by banks.[11] This is especially so when there are large numbers of small value over the counter transactions, use of complex instruments (where payments represent settlements for a variety of transactions that are not individually reported) and where bank customers conduct BOP transactions through accounts with banks abroad. As discussed earlier, an additional factor in some countries is the prevalence of large domestic transactions in foreign currency, which can result in misreporting in the ITRS. Such misclassifications are revealed once reliable data are reported by annual enterprise surveys of cross-border financial flows and stocks together with all the other direct reporting envisaged under the project. This is already apparent from comparisons of survey data with comparable ITRS data in the case of both Ghana and Kenya and almost certainly will be the case for Nigeria once Nigeria's annual enterprise survey of inward direct investment is firmly established. This has implications for the design of the ITRS in such countries, which remains a key data source for the initial BOP compilation but must also meet a test of being a predictor of more reliable data sources which become available at a later date. Moreover, the ITRS has to serve as the only data source for a variety of BOP transactions for which direct reporting is not feasible (such as portfolio investment abroad by households).

As a result, work in redesigning the ITRS classifications to accommodate their use in conjunction with other data sources is a key phase in the latter part of the EDDI project and will almost certainly result in substantial revision to the BOP once all data sources are available. This is all the more likely given the requirement that the BOP financial account be fully consistent with the IIP. When this is not so, serious inconsistencies arise between published BOP data and published IIP data.

Cooperation with Donors, Countries, and Regional Organizations

By design EDDI was to emphasize themes of regional cooperation, cooperation with other donors, and encouraging the African countries themselves to cooperate more in terms of sharing experiences and lessons learned. DFID and the World Bank financed early enterprise surveys in The Gambia and Kenya, respectively, and that experience facilitated the new and improved surveys designed with EDDI's assistance to be internally financed and sustainable. South-south

[11] In this report, these reporting systems are referred to as ITRS.

cooperation has also played a major role. The basis of much of the early progress in conducting surveys was a workshop hosted by the Bank of Uganda where they demonstrated the internally financed survey that they had developed that was cost effective and sustainable. This survey was then used as a key model for the project. More recently, the Bank of Uganda and the Bank of Ghana have participated in study visits where they provided training and demonstrations to assist other countries in the module to develop management software databases. Finally, Kenya has benefitted from MEFMI's database assistance and questionnaire template. Table 1 provides a summary of the various channels of cooperation in the project.

Table 1. Cooperation with Donors, Countries, Regional Organizations

Participating Countries	Cooperation with Donors	Cooperation with Countries	Cooperation with Regional Organizations
The Gambia	Built on the lessons of earlier DFID funded TA to The Gambia to develop enterprise surveys. DFID and the World Bank financed early enterprise surveys. DFID and the World Bank financed earlier enterprise surveys	TA provided by Ghana on database design. Questionnaire based on that used by Ghana.	
Ghana	DFID and the World Bank financed earlier needs assessment studies in support of enterprise surveys	Questionnaire based on that used by Uganda. Provided TA on database design to The Gambia.	
Kenya	The first enterprise survey conducted by the KNBS under the EDDI project was funded by the World Bank under its STATCAP program. DFID and the World Bank financed earlier needs assessment studies in support of enterprise surveys.	Questionnaire based on that used by Uganda.	Participated in the MEFMI capital flows project for Kenya's first enterprise survey under which MEFMI provided the database and questionnaire.
Mauritius	TA provided under the EDDI SDDS module to establish reporting by the offshore financial center.		
Mozambique		Questionnaire and database based on those used by Uganda.	
Nigeria		Questionnaire based on that used by Ghana. TA provided by Ghana on database design.	
Uganda (mentor country)		Hosted workshop at start of project that demonstrated to all six countries their enterprise survey. Provided database TA to Ghana and Mozambique.	

Progress in Participating Countries

The following presents a status report on outcomes for each of the participating countries as of July 2013 and expected outcomes by the close of the project in March 2015.

For all the participating countries, a work program for the duration of the project was agreed with the BOP compiling agency in the form of a project framework summary that listed the expected outcomes, verifiable indicators, expected completion dates, and implementation status. This was updated on each mission to indicate the implementation status and changes in expected completion dates. For all countries, following the initial assessment of data sources, the key activity has been the establishment of an annual enterprise survey of cross-border financial flows and stocks. Once established, the second stage was to agree on the design of worksheets needed to compile an IIP statement consistent with *BPM6* from available data sources including the enterprise survey. This included a review of available data sources for compiling cross-border flows and stocks for portfolio investment assets and liabilities and how best to use them in conjunction with the results of the enterprise survey. In conjunction with this, a review was to be undertaken of whether the new data sources would result in changes in the BOP financial account to ensure their consistency with opening and closing IIP statements and with data for external debt.

Not surprisingly, for all participating countries, the establishment of an enterprise survey has proven a major undertaking. This involved steps required to establish the survey frame, which has generally taken a few surveys before it settled down. For most countries, data collection has required a budget because of the use of enumerators to deliver questionnaires to enterprises and collect completed questionnaires. A considerable effort was made to establish best practices in the data review process and in the design of a database based on appropriate data management software. Once the enterprise surveys had been conducted for two to three years, guidance was provided on the appropriate use of grossing up techniques to ensure consistency across surveys and with data for earlier years.

Once countries had published revised BOP financial account data together with opening and closing IIP statements, with both BOP and IIP data in accordance with *BPM6* standard components, data sources permitting, the next stage was to explore the scope for expanding the scope of the annual enterprise surveys to include services and income credits and debits and more specialized enterprise surveys. A further objective was to establish a survey frame and questionnaire that could be used to support a quarterly enterprise survey to estimate BOP and related IIP data within four months of the reference date. At this time also, an assessment would be made of major gaps in *BPM6* implementation that could be addressed without major expense.

As experience has built up, there has been an increased focus on database design issues, with most participating countries starting with the use of linked excel spread sheets and many now developing the use of Access based data management software, which offers much greater functionality. Database design issues have focused on tables that facilitate scrolling through the database on an enterprise-by enterprise basis to facilitate completion of the process of data review and as a tool for the expansion or contraction of the database to support future surveys, the design and application of grossing up techniques to address non-response, and the generation of working tables that facilitate the compilation of BOP and IIP statistics consistent with *BPM6*.

The following provides an update of progress by countries participating in the EDDI project:

- For **The Gambia**, because the EDDI project followed a completed cycle of enterprise surveys under an earlier DFID funded FPC-CBP that was completed in 2009, it had been assumed that an annual enterprise survey had been fully established with a supporting database together with the development of an IIP statement and revised BOP statistics that make full use of this data source. However, loss of staff and institutional memory at the Central Bank of The Gambia (CBG) meant that the objectives of the FPC-CBP project were not realized and have handicapped progress under the EDDI project. This was all the more unfortunate as the need for an annual enterprise survey was particularly acute given that, alone among the EDDI participating countries, The Gambia ceased its ITRS reporting following the abolition of exchange control and has been compiling BOP data largely from administrative data sources. Moreover, because the supporting database for the FPC-CBP project has not been operational, the only data available were from the published reports of the FPC-CBP project. Subsequent efforts to establish a database adapted from the Bank of Ghana (BOG) database and questionnaire to support future surveys also proved unsuccessful, notwithstanding a visit by a capital flows team from the CBG to the BOG. Support is now being given to helping the CBG establish a system of linked spread sheets to permit the aggregation of survey data for the period 2010–2012 that could be used to supplement the data for earlier periods that are now only available from the published reports of the FPC-CBP project. The last mission (the third under the EDDI project) reviewed completed questionnaires for some 40 of the larger enterprises for 2010 and 2011 out of a frame of some 100 enterprises in conjunction with available financial statements. Training was provided on how to complete the process of data entry and review. Because of the importance of investment in real estate by nonresidents, under the FPC-CBP project, estimates were made based on reporting by the main developers and have been carried forward under the EDDI project using an indicator series from the national accounts. In the last mission, benchmarks were set for updating the database for the 2012 PCFS, the estimation of real estate in inward direct investment, and the resolution of differences between BOP data compiled by the CBG and those made by the IMF's African Department. In addition, a new questionnaire was proposed for the 2013 Foreign Assets and Liabilities Survey (2013 FALS). Delays in processing the results of the PCFS for 2010, 2011, and 2012 have prevented the publication of a revised BOP fully integrated with the IIP, but the completion date of April 2015 is now set for re-establishing the annual enterprise survey and the use of the resulting data in compiling BOP and IIP data through 2012.

- For **Ghana**, considerable progress has been made in the first half of the project in setting up an annual Foreign Private Capital Flows Survey (FPCF). Issues relating to survey funding, survey frame (which included the use of an exploratory survey to identify enterprises with significant holdings of foreign liabilities and assets), questionnaire design, the survey launch (with an active role played by the Governor of the BOG at the launch meeting), data collection (relying on the use of enumerators to deliver and collect completed questionnaires to ensure that response targets are met), data review (with a major focus on the use of enterprise financial statements), and data management have been addressed. For questionnaire design, the application of data management software, the use of enumerators, and the application of grossing up techniques, the Bank of Uganda model was closely followed. The survey frame has recently been expanded to some 320 enterprises to meet a threshold set for foreign liabilities and assets. Other issues addressed include the treatment of mergers and acquisitions, oil and gas exploration and production, inward investment in real estate, the statistical reporting of large construction projects, the amendment of the database to meet the needs of the IMF's CDIS, and estimation techniques that can be used to address issues of non-response that would ensure the comparability of data across surveys. As a result, the survey results have been fully integrated into the BOG's published BOP and IIP statistics and changes in the IIP can be readily explained by transactions in the reporting period, revaluations, and other volume changes. However, delays in processing the results of the latest FPCF and in the introduction of quarterly FPCF have delayed the publication of a revised BOP fully integrated with the IIP that meets the GDDS timeliness goals (publication within nine months of the reference date).

  For portfolio investment, the main focus has been on establishing data sources for inward portfolio investment, on which work is continuing. Available data sources have been explored to determine the feasibility of reporting purchases and sales of equities and bonds by nonresidents together with the value of outstanding holdings of government bonds and private issues of equity and debt securities. Both primary and secondary market trading was covered. A particular focus was on how to incorporate secondary market information with primary market information and on the computation of interest on an accruals basis. Reporting was established with respect to government bonds and secondary market trading in private issues. Although nonresidents have not been active in purchasing corporate debt securities, a listing of such securities was agreed together with a report form to be completed by the issuers, including details of the residence status of parties to nominee accounts that are active in the debt securities market. For equity securities, reporting is limited by the fact that a securities depository has only recently been established. Further work will be required to establish alternative data sources. A system of regular reporting to the BOG by the Securities Exchange Commission was proposed to facilitate quarterly reporting of information on nonresident shareholding needed to compile BOP and IIP data on inward portfolio investment.

The subsequent phase of the EDDI project has focused mainly on the design of a pilot quarterly FPCF survey using a frame of 20 companies that account for a large part of total foreign liabilities reported in the annual FPCF, and which includes both listed and unlisted companies, and on possible changes in the ITRS that would make it a more useful database in conjunction with the FPCF. The latter effort will draw on Mauritius's experience in identifying the names of enterprises in a given year that account for the bulk of inward direct investment (or, more broadly cross-border financial flows), as reported in the ITRS, with a view to facilitating the reconciliation of FPCF with ITRS data.

- For **Kenya**, initial efforts to conduct an enterprise survey were hampered by a lack of funding to support data collection and by delays in accessing funding by the World Bank to support a large frame capital flows survey. In the event, funding under the World Bank Statistical Capacity Building Program was made available to support the 2010 Foreign Investment Survey (2010 FIS) conducted by the Balance of Payments compiling agency, the Kenya National Bureau of Statistics (KNBS). The results of this survey were used together with other data sources to compile a preliminary IIP statement consistent with *BPM6* and preliminary revised BOP statistics. However, uncertainty about how future surveys would be funded has delayed efforts to compile and publish revised official BOP and IIP statistics. Funding for an annual enterprise survey starting with the 2013 FIS has now been agreed with the three main local stakeholders, the KNBS, Central Bank of Kenya, and the Kenya Investment Authority, using a survey frame of 500 enterprises that reported foreign assets/liabilities in the 2010 survey. An in-house working group was also established within the KNBS to develop a database in support of the 2013 FIS based on appropriate access based data management software, drawing on the experience of the Bank of Uganda and the MEFMI.

  If successful, the 2013 FIS will facilitate the posting on the KNBS website of revised BOP (in the latter case replacing the ITRS data that are used to compile initial estimates) and IIP statistics based on *BPM6* standard components that make full use of the 2013 FIS. The accompanying IIP statement would be based entirely on direct reporting, including direct reporting of portfolio investment liabilities based on reporting by listed companies to the Capital Markets Authority and supplemented with data from the FIS for unlisted companies. Work has also been completed to establish direct reporting of nonresident purchases and holdings of government bonds. This would indicate completion of a key objective of the project and one of the two benchmarks set on the last mission to Kenya (the third under the project). The second benchmark set was the completion of the work of the KNBS in-house working group to establish a database in support of the 2013 FIS. The latter objective is essential if the KNBS is to conduct its own FIS based on its in-house expertise in database design and its own lessons of experience in questionnaire design. Following an earlier assessment of the reliability of ITRS data for BOP compilation, a further assessment is planned against the results of the 2013 FIS with a view to ensuring that direct reporting and ITRS reporting are mutually supportive and that the ITRS serves its primary purpose of providing broadly reliable first estimates of the BOP. It is expected that this objective will be met before the close of the project.

- For **Mauritius**, three enterprise surveys have now been conducted in support of the project and a fourth is under way for 2013 (2013 FALS) with a survey frame of around 590 enterprises to collect 2011 and 2012 data. These have permitted the compilation of an IIP statement that has largely been carried forward by the use of cumulative flows from the ITRS when FALS data were not available. Efforts have been made to expand the survey frame and improve response, though a number of major enterprises have been unwilling to participate. Evidence for this was apparent from the fact that the FALS data have not been picking up the substantial inflows of direct investment (equity and debt) that are reported in the ITRS. Efforts are being made to ensure that ITRS data sources are used to expand the FALS survey frame, and also to use ITRS data in conjunction with the financial statements of major non-responding enterprises to facilitate grossing up for non-response. The frame will also be expanded to include responses to questions included by Statistics Mauritius in a census of establishments. In this respect, it is worth emphasizing that, alone of all the participating countries, Mauritius has not relied on enumerators to deliver to enterprises and collect completed questionnaires from them, but has used mail, email, and telephone communication to deliver questionnaires and follow up on non-response. Assuming that problems of FALS non-response by major enterprises can be addressed, Mauritius will be able to compile IIP statements that are mainly based on direct reporting and without resort to enumerators for data collection.

  Following Mauritius's participation in the EDDI project, an expansion of direct reporting by enterprises resulted from Mauritius's subscription to the IMF's Special Data Dissemination Standard. This has required that companies with global business licenses (GBCs) in Mauritius, and whose business is largely offshore, be treated as resident for statistical purpose.[12] To address this, an annual GBC survey has been introduced, similar in design to the FALS, and focused on the needs of BOP, IIP, and national accounts statistics. These surveys are completed by the management service companies that represent the interests of GBCs and undertaken by the Statistics Division of the Bank of Mauritius (BoM). Three such surveys have been undertaken to date confined to the larger group of GBCs (GBC1s) which are required to manage their accounts in Mauritius. This reporting has been accorded priority along with the FALS and is to be expanded to cover all GBCs and for quarterly reporting to be gradually introduced. The latter is required because of the unreliability of ITRS data for GBCs, as local banks are unable to report transactions

[12] There are two types of GBCs: GBC1s and GBC2s. The former are considered tax residents of Mauritius while GBC2s are not considered tax residents of Mauritius. For BOP and IIP purposes, both GBC1s and GBC2s should be considered residents of Mauritius.

conducted by GBCs through their bank accounts abroad. As a result, Mauritius has included the results of the GBC1 survey in published annual IIP data starting from 2009 and estimates of GBC1 transactions in quarterly BOP data starting from 2010.

During the third mission under the EDDI project, efforts were recommended to address the problem of non-response to the FALS by major enterprises (of which some 30 were identified that account for the bulk of inward direct investment reported in the ITRS). In addition, two benchmarks were set. These were to take steps to expand the survey frame to improve the coverage of the non-bank financial sector, and, in support of the 2013 FALS, use the in-house database that is being developed through the application of appropriate data management software with the help of the BoM Information Technology Department. Because of continuing differences between the ITRS and FALS data for BOP financial account transactions, publication of a revised BOP fully integrated with a published IIP based on direct reporting has been delayed, but should be achieved by the close of the project. Achievement of this objective will require that FALS data for cross-border financing are broadly consistent with the ITRS data and that differences can be explained in terms of accruals and cash flow accounting. Once this is achieved, direct and ITRS reporting will be reviewed to ensure that they are mutually supportive.

Subsequently, in preparation for meeting the requirements of Mauritius's adherence to the SDDS Plus, an IMF mission on multi-sector statistics and on cross-sector data consistency took place during January 23–February 5, 2013. Mauritius, as a SDDS subscriber, should start compiling quarterly IIP with quarterly timeliness beginning with the first and second quarters of 2014 unless the authorities take the flexibility option, which it is understood they will take for the quarterly IIP. With the view to enhance the quality of BOP and gross external debt data by sector, steps should be taken to gradually move to quarterly survey compilation. Additionally, authorities should introduce regular reporting of annual data for GBC2s, and once annual data are compiled and sound results obtained, introduce quarterly reporting if data are substantial. The remaining two EDDI missions will assist authorities in its efforts to introduce these enhancements.

- For **Mozambique**, the initial assessment was that ITRS reporting was considered to be more reliable than the other EDDI participating countries because exchange controls had not been liberalized, although there has been some loosening in the course of the project. In addition, alone among the EDDI participating countries, a quarterly BOP enterprise survey had been introduced following earlier technical assistance with a focus on identifying cash and non-cash BOP transactions and with a frame of some 40 enterprises for which electronic reporting was established. The initial focus for the EDDI project was therefore on the design of an annual enterprise survey frame of some 200 enterprises and a review of questionnaire design based on accruals reporting as shown in enterprise accounts that would support an annual FALS and be used to complete the IIP statement.

  Three such enterprise surveys have now been conducted in support of the project, and a fourth is planned for 2013 (2013 FALS). Considerable progress has been made in integrating the three main data sources, the annual FALS, the quarterly FALS, and the monthly ITRS. Changes have also been made to the survey frame and questionnaire for the quarterly enterprise survey to ensure that its results can be grossed up to compare with the results of the annual enterprise survey. Although the resulting transactions data from the FALS differ somewhat from the ITRS, they are within the bounds of what one would expect, given that one is on an accruals basis and the other on a cash basis. Hence, it is acceptable that the annual FALS stock data are used to update the IIP and that data for BOP financial account transactions are taken from the ITRS with some adjustment from cash to accruals reporting (such as the inclusion of data for retained earnings). As a result, the two sets of data are close save for issues of exchange rate valuation and in that sense mutually supporting. However, because of a reluctance to revise BOP data based on ITRS reporting, changes in the IIP cannot be fully explained by transactions in the reporting period, revaluations, and other volume changes, as there will be an element of errors and omissions resulting from the use of different data sources. As a result, publication of a revised quarterly and annual IIP fully integrated with the published IIP has been delayed. Nonetheless, substantial progress has been made on issues relating to survey funding, survey frame, questionnaire design, data collection, and data review. Issues on data management remain, especially on the need to develop appropriate data management software and the further integration of cash reporting (under the ITRS) and accruals reporting (under the FALS).

The primary objectives having been largely achieved, the focus of recent missions to Mozambique has shifted to: (i) completing a review of data sources and compilation methods for portfolio investment, and how they should be used to produce consistent data in the BOP and IIP; (ii) a review of data sources for direct investment in the oil and gas sector (for which substantial BOP transactions are not reported in the ITRS); and (iii) a review of possible changes to the FALS questionnaire to add questions on services credits and debits, possibly resulting in the introduction of specialized FALS questionnaires targeted at specific export service industries.

- For **Nigeria**, earlier experience of the Central Bank of Nigeria (CBN) in conducting enterprise surveys had suffered from the inadequacy of survey frames and from major problems of non-response by key sectors (such as oil and gas) in which there was likely to have been significant foreign investment. Drawing on this experience, in 2010 the CBN agreed to participate in the CDIS by using the CDIS questionnaires for inward and outward direct investment and requesting enterprises to enclose financial statements with the completed returns. In the event, because of poor response to the outward survey, only the results of the inward survey were tabulated (covering 250 enterprises that are drawn from previous BOP enterprise surveys). Doubts remained about the adequacy of the survey frame and the exclusion of joint venture companies (JVCs) from the oil and gas sector. The survey suffered from a lack of sensitization meetings with enterprises and relied on a mail-out for completing questionnaires rather than on the use of enumerators. There were significant differences between the survey results and previously published data for inward direct investment.

A second enterprise survey, called the Survey of Foreign Assets and Liabilities (SOFAL) was conducted in 2011 with a questionnaire covering all cross-border private capital flows (2011 SOFAL). An expanded survey frame of 270 enterprises that was built up on a sector by sector basis based on existing data sources and industrial contacts and with a much improved response rate (85 percent). However, it was later concluded that the survey frame excluded enterprises in the free trade zones. There was a determined effort at sensitization comprising meetings with enterprises, checks were made against financial statements for most enterprises, and enumerators were used to deliver questionnaires to enterprises and collect completed questionnaires from them (which resulted in a significant increase in response rates). Response remained poor by JVCs and the results were not incorporated into the CBN's published IIP statistics. Because of a major investment by the CBN in developing an IT system in support of the ITRS that is still not complete, plans to develop an in-house database in support of the SOFAL using appropriate data management software were postponed. A third SOFAL took place in 2012 with a frame of 320 enterprises. The high response rate of the previous survey was maintained and there was a significantly improved response by JVCs. However, response by enterprises in the free trade zones was incomplete. The improved response and application of grossing up techniques for non-response has meant that the data for direct investment inflows are now comparable to the ITRS data that are used in the CBN's official annual BOP statement. Since the latter do not include enterprises in the free trade zones, some upward revision to the official BOP data can be expected once adequate reporting by enterprises in the free trade zones is established. As the larger frame will strengthen the need for a supporting database using appropriate data management software, an in-house CBN working group has been established to develop such a database, for which a field trip to study the experience of the BOG has now been arranged for June 2013.

On the assumption that the 2013 SOFAL will result in an adequate survey frame and an adequate response that would permit the use of grossing up techniques to compile comparable data across years for enterprise BOP financial account transactions and positions, attention will need to be given to the implications for using SOFAL data in conjunction with ITRS data. It seems very likely that SOFAL data for BOP financial account transactions will become the preferred data source for such transactions and that revisions to the BOP financial account (and to the IIP) will result. The implications of this for the redesign of the ITRS, including the definition of residence followed, would then have to be explored.

Table 2 provides a summary of the experiences of the six countries conducting enterprise surveys.

Table 2. Review of Country Experiences Conducting Annual Enterprise Surveys

Activity	The Gambia	Ghana	Kenya	Mozambique	Mauritius	Nigeria
Secured annual internal funding	Yes	Yes	Yes	Yes	Yes	Yes
Successfully conducted annual enterprise survey	Yes	Yes	Yes	Yes	Yes	Yes
International Investment Position Statement based on direct reporting	Trial IIP based on direct reporting	Annual IIP published in *IFS* and *BOPSY*	Annual IIP may soon be published in *IFS* and *BOPSY*	Annual IIP published in *IFS* and *BOPSY*	Annual IIP published in *IFS* and *BOPSY*	Trial IIP based on direct reporting
Survey frames well established	Yes	Yes	Yes	Yes	Yes	Yes
Questionnaire design	Based on *CDIS Guide*	Based on Bank of Uganda model	Based on Bank of Uganda model	Based on Bank of Uganda model	Based on *CDIS Guide*	Based on *CDIS Guide*
Data collection	Staff distribute and collect questionnaires	Staff distribute and collect question-naires	Staff distribute and collect question-naires	Staff distribute and collect questionnaires	Use less expensive mail-outs	Staff distribute and collect question-naires
Data review and validation established	Yes	Yes	Yes	Yes	Yes	Yes
Database	Linked spread sheets	Access-based data manage-ment software	Linked spread sheets, planning data manage-ment software	Linked spread sheets	Linked spread sheets, planning data manage-ment software	Linked spread sheets, planning data manage-ment software

III. Application of the Balance of Payments Compilation Guide

This section draws on the best practices in data compilation as described in the draft *BPM6CG* with a particular focus on their adaptation to meet the needs of African countries.[13]
A summary of experience from the EDDI project in conducting an annual enterprise survey of cross-border financial flows and stocks is included in the draft *BPM6CG* in the form of a text box describing the purpose of the survey, how the survey population was identified, how the potential respondents were approached, how the process of data review was conducted, how non-response was followed up, and the use of the survey results.[14]

[13] In conjunction with this, the IMF's *Coordinated Portfolio Investment Survey Guide* and the *Coordinated Direct Investment Survey Guide* were also consulted.

[14] *BPM6CG* Chapter 2, Box 2.2, pages 26–28.

A. Selecting a Survey Frame

The survey frame comprises the set of units subject to the survey and the details about those units that can facilitate conducting the survey. It can be used to list units as well as to facilitate some of the steps involved in conducting the survey, notably through storing and tracking information on the units being surveyed. It also provides the basis for grossing up results once the survey has been implemented. The survey frame is confined to private enterprises although some participating countries have selectively included public corporations.[15] In practice, participating countries have taken steps to establish a business register in conjunction with the frame for the first enterprise survey. The business registers developed contain information on all enterprises subject to such surveys, including the name of the enterprise and contact persons, email and mailing address, annual accounting year, whether listed on the local stock exchange, key information such as industry, ownership, company group structure, area and size of BOP activity, a list of which enterprise surveys they have participated in, and a list of enterprise financial statements that have been provided in support of such surveys. Once established, the business register provides the initial data source for establishing a survey frame. In practice, business registers have tended to become more complete as direct contact with enterprises has become more extensive, and as the use of card indexes has been replaced by the use of electronic files. The following provides a list of key sources that were used by countries to develop their business register and ensure that it is up to date:

- Existing registers of enterprises maintained by the statistical or other government agency for other purposes that might provide useful information on those enterprises with international transactions and positions.
- Government administrative sources. Depending on legislation and administrative arrangements or the authority of the collection agency, these might include: taxation records, files, or lists (including value added tax files and customs files).
- Information held by foreign investment approval agencies or marketing boards.
- Information held by regulatory authorities such as those responsible for supervision of financial institutions.
- Statutory company reports and company registration details.
- Records held in foreign exchange control or ITRS.
- Media reports (business magazines, newspapers, or trade journals) such as reports on mergers and acquisitions or major projects or financing initiatives.

[15] Foreign borrowing by public corporations that carry a government guarantee is assumed to be covered by existing data for public sector external debt. A case can be made for including some public corporations in the frame of an enterprise survey. These are likely to comprise public corporations that have some foreign equity and public corporations that are known to borrow abroad without a government guarantee, or which have substantial trade credit obligations and claims.

- Industry associations and telephone directories.
- Social security and pension funds.

Notwithstanding efforts made to draw on all these data sources, of critical importance is information provided by the enterprise itself to the compiling agency. For information required before a survey can be conducted, a common initiative is to conduct a one or two page exploratory survey to collect information vital to the business register. This can serve to complete a business register in advance of launching a large frame enterprise survey for the first time, and also provide key information for establishing a suitable frame for subsequent smaller frame surveys. The most efficient way to conduct an exploratory survey is to attach such a survey as a supplementary request to an existing enterprise survey, such as the census of businesses conducted by statistical agencies. In practice, because of poor lines of electronic communication and the absence of pre-existing enterprise surveys, survey frames have been established with only limited resort to exploratory surveys.

This outcome is demonstrated by experience in the first two years of the EDDI project. In nearly all cases, the most useful data sources in establishing an initial survey frame were a combination of meetings with industry associations to provide names and contact addresses of their members, especially those engaged in export trade or capital intensive industries; meetings with the local stock exchange to provide names and addresses of listed companies, meetings with the regulatory authorities for financial institutions and those responsible for licensing enterprises in export processing zones, meetings with foreign investment approval agencies, and meetings with enterprise groups to establish how enterprise groups should report and to provide lists of resident subsidiaries/affiliates of the enterprise group. In the event, tax records proved to be of limited use as they did not provide a useful tool for identifying enterprises with significant foreign liabilities/assets, and, with the exception of Mauritius limited use was made of records held in foreign exchange control or ITRS.[16] The latter would have required banks to provide a list of enterprises for which they were reporting BOP financial account transactions in their ITRS submissions.

Earlier enterprise surveys that were conducted in the region with external funding were designed to have large frames for the initial survey. These were subsequently reduced as enterprises that did not meet a threshold of size of foreign liabilities/asses were filtered out. In practice, this approach made it possible to reduce the size of subsequent survey frames still further to reflect budget constraints when ownership of the survey was fully taken on by the compiling agency. For all participating countries, the survey results showed that the distribution of enterprises with significant holdings of foreign liabilities/assets and significant cross-border BOP financial account transactions is highly skewed with commonly 200–300

[16] The Mauritius experience is instructive, as although its ITRS database is transactional, by recognizing that the bulk of cross-border financing by direct investment enterprises is lumpy, a list of enterprises accounting for the bulk of such transactions can readily be assembled and is not large in any given year.

enterprises accounting for some three-quarters of BOP financial accounts transactions and positions. This outcome has the consequence that the survey frame does not have to be large to ensure that cross-border financial flows and stocks are adequately covered.

The preferred outcome has been to conduct a large frame enterprise survey in the initial phase of a cycle of enterprise surveys that serves both the process of discovery of enterprises with significant foreign liabilities/assets and as a census. An initial census may be important at it provides a benchmark for estimating the universe in subsequent surveys that may be confined to enterprises that meet a much higher threshold of foreign liabilities/assets.

An additional factor affecting survey frames has been the fact that in some participating countries survey frames were designed to meet multi local stakeholder needs. This tended to encourage larger survey frames to ensure that each local stakeholder need is met. These additional needs included investor perception surveys intended to promote private sector support, the needs of foreign investment approval agencies, the need for supplementary information on employment, wages, and production by direct investment enterprises, and more generally the need for a range of information on private sector activity on an industry by industry basis. Increasingly, this approach is giving way to smaller survey frames in support of annual enterprise surveys that are exclusively determined by the needs of BOP and IIP statistics. As discussed below, questionnaire design has tended to remain multi-purpose with a number of countries retaining investor perception segments though perhaps more on a periodic rather than on an annual basis.

For all the EDDI participating countries, a major issue in establishing the survey frame has been the treatment of enterprise groups. Initially, the working assumption was to allow consolidated reporting by enterprise groups but this soon proved to be impractical because of the difficulty of excluding nonresident subsidiaries/affiliates from consolidated reporting. As a result, all enterprise surveys by participating countries are now conducted on an unconsolidated basis and include all resident subsidiaries/affiliates of enterprise groups likely to meet a threshold by size of foreign liabilities/assets within the survey frame.

For some participating countries, depository corporations (banks) have been excluded from the survey frame as data for cross-border assets and liabilities of banks can be compiled from monetary statistics supplemented by data for inward and outward direct investment provided by the banking regulatory authorities. In other instances, they have been included but the only data used were for direct investment, with other foreign assets and liabilities taken from monetary statistics.

B. Questionnaire Design

The draft *BPM6CG* includes a BOP survey form (Form 18) for inward and outward direct investment that meets the requirements of *BPM6*. The survey form is divided into 6 sections (parts A through F). Part A comprises general information in the enterprise. Part B comprises balance sheet data for equity and debt needed to compile opening and closing stocks of inward direct investment. Part C comprises balance sheet data for equity and debt needed to compile opening and closing stocks of outward direct investment. Part D reports data for inward direct investment transactions, and other changes together with opening and closing balances, with separate sections for the reporting of transactions in equity (section D.1) and transactions in debt instruments (section D.2), the latter with a distinction between long and short-term debt instruments. To facilitate the reporting of reverse investment assets in inward direct investment, there is separate reporting of assets and liabilities. Part E reports the equivalent data for transactions in direct investment abroad (including reverse investment liabilities). Part F lists the data needed to meet the requirements of *BPM6* for the IIP.

This format has to be adapted for countries wishing to conduct an enterprise survey of all BOP financial account flows and stocks for a frame comprising all enterprises that meet some threshold by size of foreign liabilities/assets. In the course of the project, survey form 17 in the draft *BPM6CG* has been expanded to facilitate the reporting of transactions and positions for other investment. For example, the questionnaire used by the BoM in support of their 2013 FALS follows this format.[17] Parts of the questionnaire are specific to Mauritius, such as the supplementary questions that are included regarding liabilities to and claims on GBCs that reflect efforts to integrate the currently separate BOP reporting by GBCs with the FALS. Generally countries in the process of designing questionnaires should minimize the extent to which they add questions to satisfy other user data demands, keeping in mind the trade-off between length of questionnaires and response rates.

The basic format followed is to first identify those enterprises within the survey frame that are direct investment enterprises (on the inward side) or direct investors (on the outward side), which are then required to complete the sections of the questionnaire relating to inward and outward direct investment. All other enterprises would be asked to complete a Part II, which is designed to meet the requirements of *BPM6* for other investment transactions and positions. This would comprise inward and outward portfolio investment and a breakdown of external debt (and claims in the form of external debt instruments) by types of debt instrument. This section includes borrowing by direct investment enterprises from unrelated parties abroad (and the equivalent data on the outward side). The required categories are as shown in the format for reporting the IIP in Part F of the survey form 17 in the draft *BPM6CG*.

In practice, there has been considerable variation in questionnaire design by countries participating in the EDDI project. This may be a response to the need for data (i) by other local stakeholders; (ii) on services debits and credits; (iii) on employee compensation with respect to foreign nationals that may be nonresident; and (iv) on the currency of denomination of external debt instruments (partly to provide an alternative estimate for net transactions in each

[17] The questionnaire for the BoM's FALS can be found on the BoM website (www.bom.mu/default.asp?id=71538).

type of debt instrument given that enterprises in the region have been reluctant to provide data for transactions other than for drawings and repayments on long-term loans).

For portfolio investment, a distinction is made between portfolio investment in listed companies and in unlisted companies. For the former, most of the participating countries prefer to use reporting by the local stock exchange for transactions and positions, both valued at market prices, and rely on enterprise surveys for portfolio investment in unlisted companies. For the latter, in the absence of markets in such securities, they are valued in relation to the book value of shareholders capital.

In principle, transactions and positions resulting from financial derivatives contracted with nonresidents may be included in the classification of instruments. However, it is more likely that they are not reported, and when reported tend to be inaccurate. A prior task is to establish which enterprises are engaged in such transactions, which are likely to be confined to banks and commodity exporters active in the swap and forward markets and possibly other enterprises that wish to hedge against their foreign currency exposures (such as in foreign currency denominated external debt). For all of these, an effort is made to establish what their accounting practices are, as this will determine what kind of information can be reported in an enterprise questionnaire. For two countries (Mozambique and Ghana), a separate financial derivatives questionnaire has been designed for banks following the example of a Bank of Uganda financial derivatives survey that was established some years ago with IMF technical assistance.

All questionnaires follow *BPM6* with regards to the classification of external debt instruments between unrelated enterprises (loans, trade credit and advances, and accounts payable/receivable, all with a further breakdown by long and short-term contractual maturity). Separate reporting is included in most questionnaires for each of insurance technical reserves, pension entitlements, employee stock options, investment fund shares, and financial derivatives, mainly with a view to determining the existence of such instruments in the form of cross-border liabilities and claims in the accounts of reporting enterprises. However, for most of the countries in the EDDI project there are very few of such transactions to report.

C. Data Collection

Most industrial countries have seen major efficiency gains in conducting enterprise surveys in both the process of data collection and data processing as a result of advances in the use of electronic media and in the design of data management software, which are discussed in the draft *BPM6CG*. However, experience in the region in using mail-outs for sending enterprise questionnaires has been disappointing and the use of email and other electronic media has only proven effective once a working relationship with a counterpart in the enterprise has been established, and even then is best suited for collecting data from the larger enterprises. This has been so even when best efforts are made to launch the first enterprise survey and conduct periodic sensitization meetings with targeted enterprises in support of subsequent surveys. Most participating countries have concluded that the most effective way of delivering enterprise questionnaires and collecting completed questionnaires has been through the use of enumerators to deliver questionnaires and collect completed questionnaires, even though this has proven costly. A common practice has been for the enumerator to physically present questionnaires to the enterprise and return after two week to collect completed questionnaires.[18] Enumerators are contracted for the period of weeks in which data collection is scheduled to take place. Compensation arrangements vary, but the most effective arrangements involve two components in the payment arrangements, one to meet travel and per diem costs and a second for the submission of the mandated sections of completed questionnaires, commonly comprising all data needed for BOP and IIP compilation.

In the case of a large frame enterprise survey that is being conducted for the first time, it is often the case that the survey frame includes enterprises with incorrect addresses or enterprises that have no BOP or IIP data to report. In such cases, to avoid giving enumerators an incentive to submit incomplete returns, it is important that only their travel and per diem costs are met to ensure that there is a strong incentive for them to submit completed returns. Such frictions are more likely to arise when a survey frame has been hastily compiled, especially if the process of data collection is combined with efforts to establish the survey frame. It is therefore essential that adequate resources are committed to establishing the survey frame before the survey is conducted.

D. Data Review

The draft *BPM6CG* provides extensive guidance on the data review process. For all countries in the EDDI project, considerable effort was given to establishing best practices for data review. These practices have evolved as lessons were learned from the earlier surveys. They presently comprise: (i) an initial set of consistency checks of completed questionnaires that enumerators are responsible for during the enterprise visit; (ii) a supplementary set of consistency checks that are made by BOP compilers when reviewing completed questionnaires prior to entering them into the data entry screens in the database, and which include a series of checks against the unconsolidated financial statement for the enterprise for the latest available financial year that enumerators are required to collect (and also, in the case of enterprise groups, the consolidated financial statement for the group, which may have useful information on the group structure, such as a list of both resident and nonresident subsidiaries/affiliates of the group); (iii) follow up contact by the assigned BOP compiler to enterprises for which there are unresolved queries (using the information provided on completed questionnaires for the names and contact numbers, telephone and email, of the officials that signed off the questionnaire); and (iv) a final set of data review checks by a

[18] Practice varies as to whether enumerators are expected to complete an initial review of completed questionnaires, which would depend on the kind of training and who are employed as enumerators. As surveys are repeated and lessons learned, enumerators are likely to become more involved in the review process.

senior BOP compiler conducted by scrolling through the survey database on an enterprise-by-enterprise basis at the most detailed level looking for gaps and outliers in the reported data, that would then need to be addressed by reviewing the data entry screens and making corrections as needed.

The following summarizes some of the key checks that enumerators are required to complete in the field. Enumerators are required to ensure that all questions are completed:

- Should an enterprise report no BOP transactions or IIP positions, it should be confirmed that there are no transactions with nonresidents and no foreign liabilities/assets. The latter would need to be evidenced by reference to the enterprise financial statement. Contact information should still be provided to facilitate any later communication by BOP compilers with the enterprise.
- Should the enterprise financial accounts use a foreign currency as the unit of account for the purpose of reporting to shareholders, the enumerator would be expected to review the procedures for converting transactions and positions into domestic currency, assuming that the questionnaire is required to be completed in domestic currency.
- In the section of the questionnaire on general information/characteristics of the enterprise, information of shareholding structure should be checked against the enterprise financial statement.
- In the section of the questionnaire on equity liabilities to nonresidents, checks should be made to ensure that: (i) all enterprises reporting a direct investment relationship with a nonresident shareholder(s) (evidenced by their holding 10 percent or more of issued share capital) have completed all questions relating to shareholders capital and direct investment; (ii) all enterprises reporting portfolio investment liabilities (evidenced by nonresidents holding less than 10 percent of issued share capital) have completed the question on portfolio investment liabilities; and (iii) that the data entered for each completed question are internally consistent.
- In the section of the questionnaire on external debt liabilities to nonresidents, checks should be made to ensure that enterprises in a direct investment relationship with nonresident shareholders complete all questions relating to financing provided by the direct investor and their fellow enterprises (related enterprises) as well as financing provided by all other nonresidents (unrelated enterprises). For all other enterprises, checks should be made to ensure that external debt is reported against all the instrument categories requested. For all enterprises, the questions on the currency of denomination of external debt instruments and on the country of creditor should be completed.
- In the section of the questionnaire on income, checks should be made to ensure that retained earnings is equal to net income after tax less dividends paid or due (and not the stock of retained earnings reported under shareholders capital).

- In the section of the questionnaire on investment abroad, checks should be made to ensure that, where a direct investment relationship is involved (as evidenced by 10 percent or more of issued share capital being owned by the resident direct investor), data for shareholders capital according to the required breakdown, together with income and dividends paid, are reported for each subsidiary/affiliate abroad identified in the enterprise financial statement.

The second round of data review checks, completed by the BOP compilers, should include a more careful scrutiny of enterprise financial statements, especially for those enterprises that have completed the questionnaire on an enterprise accounting year basis, which is likely to be the case if the enterprise survey requests enterprises to report on the basis of their financial year.[19] Since it may not be feasible for BOP compilers to review all the completed questionnaires, priority should be given to the larger enterprises, say the largest 50 enterprises by size of foreign liabilities/assets. The selection of enterprises for this review can be made on a more systematic basis after the initial survey has been conducted. The key topics to address in this phase of the data review process are a review of: (i) whether the enterprise is a member of an enterprise group and, if so, to establish which of the resident subsidiaries/affiliates (including the head office) should be included in the survey frame; (ii) confirm that all data relating to the stock of, and transactions in, equity in inward direct investment are correctly reported in the completed questionnaire (as all the required information on equity will be available in the enterprise balance sheet account); and (iii) that all external debt liabilities that can be identified from the enterprise balance sheet account and supporting notes are included in the completed questionnaire. There may be instances where follow-up meetings with selected enterprises may be necessary to complete this review.

Regarding the checks on direct investment equity, the questionnaires ask for book values for all components of shareholders capital (paid up capital, share premium, accumulated earnings, other equity capital, and revaluations). This classification follows the standard format that most enterprise accounts follow. Regarding the identification of foreign liabilities and assets in the form of external debt instruments, it is possible that enterprise balance sheets may not always make the distinction. For example, borrowing from banks may include resident and nonresident banks, and payables and receivables may include trade credit together with domestic liabilities and claims. In such cases, follow up with the enterprises

[19] The simplest approach for an enterprise survey being conducted for the first time is to request enterprises to report on the basis of their financial year. On the assumption that the mix of accounting years stays constant, aggregating the resulting data can be acceptable. Over time, consideration should be given to requesting enterprises to report on a calendar year basis (if that is the compilers' preference). Likewise, an enterprise survey being conducted for the first time is likely to follow the accounting practices of the enterprise. Subsequent surveys can be amended to request additional information that accord more closely to *BPM6* standards (such as for the measurement of income after tax, which should exclude realized and unrealized valuation gains). The approach suggested here for the initial enterprise surveys is easier to implement and facilitates the use of enterprise financial statements in the data review process.

may be needed, particularly if there are doubts that important sources of external funding have not been reported in the completed questionnaires. A key source used for intercompany borrowing from abroad was the notes to the financial statements on related party transactions and positions.

The final set of data review checks comprises checks by a senior BOP compiler that are conducted by scrolling through the survey database on an enterprise-by-enterprise basis at the most detailed level looking for gaps and outliers in the reported data, that would then need to be addressed by reviewing the data entry screens and making corrections as needed. The need for such checks has become increasingly apparent in the course of the project. However, the ability to do so is seriously constrained when the survey database is supported by Excel spread sheets rather than by data management software. Such concerns arise when Excel spread sheets run into memory constraints with larger survey frames, especially if combined with an expanding array of output tables, including data review tables, tables needed to facilitate the derivation of BOP and IIP aggregates, and tables needed to support analysis, which may be from a set menu or designed to meet specific needs. Moreover, spread sheets are not easy to maintain, information is not centralized, and they are prone to corruption over time, especially if there are changes in staff assignments. For this reason, and also because of the growing expertise of compiling agencies' Information Technology Departments with the application of data management software, the design of data review tables in the enterprise database has been given increased attention. Such tables provide an effective tool for scrolling through an entire enterprise survey to review responses on an enterprise-by-enterprise basis for targeted questions, looking for gaps and outliers that have escaped the attention of those completing the data entry screens. As such, they provide the means for completing the data review process, preferably by someone in a management position as that provides appropriate signals to the BOP team. As a result, the final revisions to the data entry screens for each enterprise will be made following the completion of this final stage in the review process.

The precise focus of these tables has evolved over time and has been delayed as the switch by compiling agencies from using spread sheet software to using data management software has itself evolved from experience with the project. In all this, the Bank of Uganda's capital flows database, and the similar database developed by the BOG, have been taken as a model for other countries in the EDDI project. A number of countries in the project have established working groups in the compiling agency charged with the development of an in-house database in support of their PCFS using appropriate data management software (Ghana, Kenya, Mauritius, and Nigeria) that include data review tables designed to facilitate completion of the data review process. Their experience suggests that suitably designed data review tables are particularly useful for checking: (i) whether income and its components are accurately reported; (ii) whether all the components of shareholders capital are reported (including revaluations and the stock of retained earnings); (iii) whether the data for transactions in equity by direct investors are consistent with the data for positions; (iv) whether data for transactions and revaluations for each category of external debt instrument are reported, and, if not, that a decision rule is followed (which may be to enter zero under revaluations if it is concluded that the reported data for transactions are simply changes in balance sheet positions); (v) whether a breakdown of each type of external debt instrument by currency of denomination is provided; and (vi) with respect to investment abroad, whether each subsidiary/affiliate abroad has reported data for income and shareholders' capital.

E. Grossing up Techniques

Notwithstanding all the efforts that may be made to establish a survey frame that adequately[20] covers cross-border financial flows and stocks, ensure an adequate response, and complete the process of data review, there will be a need for grossing up procedures to ensure that survey data are comparable from year to year. The design of grossing up procedures follows the recommendations made in the draft *BPM6CG*. Grossing up procedures that have been used by participating countries comprise: (i) estimates for non-responding enterprises; (ii) revisions that may be needed to ensure that data are comparable from a series of enterprise surveys that have differing survey frames and response rates; and (iii) estimates needed to carry back or forward survey data to earlier/later years for which no survey data are available. Such estimates may be more accurate if applied to specific industries or to enterprises that meet some threshold of size of foreign liabilities/assets. Thus in the case of trade credit, if a relationship is found to obtain between survey data and customs or ITRS data for imports and exports of goods, there may be scope to apply grossing up techniques to estimate trade credit for periods not covered by enterprise surveys. The general principle is to find non-survey data series for which there is some observable relationship with enterprise survey data that can then be used to derive estimates for earlier or later periods.

A methodology commonly followed to apply such techniques is that of Hansen and Hurwitz[21] which applies sampling theory to derive an unbiased estimate of a population total of X units that can be obtained from a sample of x units by computing:

$$x' = \frac{N}{n}(m\bar{x}_1' + \delta\bar{x}_2'') \qquad (1)$$

Where x' is the population estimate of the total, N = total number of enterprises in the frame, n = number of surveyed enterprises, $\bar{x}_1'$ = the sample average for enterprises responding during the main survey round, m = the number of enterprises responding during the main survey round, $\bar{x}_2''$ = the average for enterprises responding during the follow-up survey

[20] As a rule of thumb, and based on experience in the EDDI project, an adequate survey response would be one in which nearly all major enterprises in the survey frame and at least 70 percent of all other enterprises in the survey frame have reported.

[21] Hansen H.M. and Hurwitz H.W. 1946, *The Problem of Non-Response in Sample Surveys*, Journal of the American Statistical Association, Vol. 41.

round, δ = the number of enterprises that did not respond during the main survey round. It should be noted that $\bar{x}_2''$ is based on a smaller number of enterprises responding during the follow-up say k compared to δ such that $k < \delta$. Subsequently $n = m + \delta$ and $m + k < n$. A key assumption of the approach is that the reporting enterprises during the follow-up (k) have similar characteristics to those that do not respond at all (δ-k) which is why the average for the follow-up is used for estimating the total for all those that do not respond during the main survey (δ) including those that do not respond at all (δ-k). Because of the assumption of homogeneity, the method is best suited when the population can be stratified into groups for which the assumption of homogeneity can be applied and then the results aggregated across the groups for which estimates are made.

These techniques were applied in Ghana to ensure that comparable survey data could be obtained across surveys with differing survey frames and response rates. Comparisons were then made for inward direct and other investment between survey data and administrative data sources, and the results used to gross up the survey data for earlier and later periods. The stratification of enterprises into four separate groups was based on the stock of equity. The respective average value of equity for each stratum during the large frame and small frame surveys were computed and the number of enterprises that reported during the large frame survey and those that did not report were used as per equation 1.

A similar approach was developed for BOP current account items that are not derived as changes in end-of-period positions, such as dividends declared to nonresidents and interest paid on external debt. The approach discussed involved computing the ratio of dividends declared for nonresident shareholders during 2007 to the book value of equity owned by nonresident shareholders as at end–2007 as per the sample results and applying this ratio to the updated book value of equity as at end 2008 to derive the updated 2008 dividends for nonresidents. For interest payments to nonresidents, the ratio of interest due to nonresident creditors during 2007 to the nominal value of debt from nonresidents as at end–2007 as per the sample results was computed and applied to the updated value of debt from nonresidents as at end–2008.

Because discussion of the scope for applying such grossing up techniques has been conditional on the successful completion of a series of annual enterprise surveys, their further development and application is likely to be given more attention in the latter phases of the EDDI project. Moreover, although most countries in the EDDI project have not yet introduced quarterly enterprise surveys, they are included in the objectives of the project because of the scope they offer for applying grossing up techniques along the lines discussed above to derive estimates for more recent periods. Suitable grossing up techniques for quarterly enterprise surveys will be developed in the course of the project.

Once the annual surveys have been fully established and the survey frame has stabilized, the usual grossing up technique recommended is to estimate for all non-responding enterprises on an enterprise-by-enterprise basis. This involves using previous survey responses in determining the beginning of period stocks and sector level performance indicators such as transactions growth rates to estimate transactions and to derive end-of-period stocks. Obviously, this approach is laborious and may need to be selective where there are staffing constraints. For example, even in the case of countries with reasonably successful surveys, with a frame of 300 enterprises, a response rate of 100 percent for the 50 largest enterprises and 70 percent for the rest would require enterprise by enterprise estimation for 75 non-responding enterprises. However, the approach offers the advantage of maintaining consistent time series for all enterprises in the database.

F. Portfolio Investment

For portfolio investment, guidance on best practices in data collection and on questionnaire design is provided in the draft *BPM6CG* together with procedures to derive stock data from transactions and transactions data from stocks. This guidance, together with the more detailed guidance provided in the *Coordinated Portfolio Investment Survey Guide* provided the starting point in establishing direct reporting of portfolio investment in all the participating countries.

For portfolio investment liabilities, enterprise surveys can generally provide reliable data on the number of shares owned by nonresidents as such information can usually be extracted from their share registers, especially if there are legal requirements to do so (such as a ceiling on the proportion held by nonresidents). However, enterprises may be less interested in keeping track of prices of traded shares or in collecting data on transactions. In most of the questionnaires used by the EDDI participating countries, enterprises are asked to report portfolio investment at book values (calculated as the percentage of shares held applied to the value of shareholders capital as reported in the enterprise balance sheet). Transactions are reported as the change in book values adjusted for any revaluations of shareholders capital reported in the enterprise balance sheet that can be attributed to portfolio investors.

Data sources used in industrial countries commonly comprise the use of securities databases to value securities in conjunction with custodian[22] or enterprise data on the ownership of securities. Alternatively, custodian data is used to report both ownership and valuation but suffers from difficulty in distinguishing between securities that comprise direct investment and securities that comprise portfolio investment. In industrial countries

[22] When a security is purchased by a nonresident, it is generally the case that a resident custodian bank will be responsible for the bookkeeping arrangements with the local stock exchange or capital markets authority in the country where the security is issued, and also for the bookkeeping arrangement that result from any subsequent transactions. For the most part, it is likely that custodian banks are only involved in transactions in securities listed on the local stock exchange (listed securities) but could also provide a custody service for unlisted securities purchased by nonresidents.

also, a concern is to ensure that securities that are subject to repurchase agreements (repos) are treated as loans by both parties to the transaction and not as the sale of securities, as otherwise there is a risk of double counting. For the countries under review, the repos market is less active. It is also apparent that there is a reluctance to introduce reporting by custodian banks. In practice, the best data source for portfolio investment liabilities for countries participating in the EDDI project has been the local stock exchange or capital markets authority, as they can report data for holdings by nonresidents in bonds and shares issued by listed enterprises, derived from the share or bond registers, and in many cases may also collect, or be willing to do so, data on transactions in shares and also in bonds if there is a secondary market. Moreover, they are usually in a position to value both transactions (inclusive of withholding taxes) and positions at market prices. For some of the countries in the EDDI project, the local stock exchange or capital markets authority has been willing to collect data on transactions and positions, and in others these data collections are confined to data on holdings taken from securities registers. In the latter case, in some cases, data for transactions has been collected through surveys of intermediaries such as brokers. The market price of securities should be calculated inclusive of dividends accrued and not paid as part of the financial liability of the debtor and hence to be included in the market price for the security. However, in practice most stock exchanges in the region report equity prices excluding accrued dividends. At present, no adjustments have been made in the current reporting systems to include accrued but not paid dividends (or accrued but not paid interest in the case of bonds).

Most of the participating countries decided at an early stage in the EDDI project to establish reporting of portfolio investment liabilities of listed enterprises by the local stock exchange or capital markets authority supplemented by data reported on the enterprise survey for portfolio investment by nonresidents in unlisted companies (most likely reported at book values) and data reported on the enterprise survey for portfolio investment by nonresidents in collective investment schemes. In parallel with these efforts, data for nonresident purchases of government bonds are collected from government bond registers or in central depository systems, which are usually managed by the central bank. If there is a secondary market in government bonds, data on purchases and sales would be needed.

This does leave open the question of how to collect data for shares and bonds issued on foreign capital markets. For the latter there are partner country data sources for issues and redemptions from the Bank for International Settlements (BIS) database on international bond issues. When using these data sources, it is generally assumed that the holders are nonresident in the country of residence of the enterprise issuing the security. It is also possible to request information on shares or bonds issued on foreign capital markets in the enterprise questionnaire. This has not been done in the enterprise questionnaires developed for the EDDI project because issues of bonds on international markets are considered to be rare.

Many of the countries participating in the EDDI project have expressed concern about residents' use of nominee accounts to facilitate the re-routing of purchases of securities issued by resident enterprises. Widespread use of nominee accounts is reported by bank custodians in their own records and by enterprises in their share registers. In some cases, there may be a legal requirement to disclose the residence of the investor represented by a nominee (who may be resident or nonresident). Failing that, such round-tripping is not easy to penetrate. In the case of custodian banks, all one can do is request banks to report the information required based on the know-your-customer principles that they are expected to follow.

For portfolio investment assets, the collection of data from enterprises is generally more straightforward as enterprises are reporting in their capacity as holders of securities rather than as issuers of securities. The main issues are their willingness to report data on transactions (purchases and sales) and whether it is their accounting practice to value their holdings at market prices rather than book values (generally representing the purchase price). In the case of banks for example, it is common practice to distinguish between a banking book (for which book values are used) and an investment book (for which market prices are used). In the questionnaires it is assumed that enterprises can report both transactions and positions at market prices. For the enterprise sector, it is assumed that financial sector enterprises, especially banks and collective investment schemes, are the principal holders of securities issued abroad.

The other sector that is likely to be engaged in portfolio investment abroad is the household sector. However, in this case, given that household surveys are not commonly a reliable or current data source, the only alternative data source may be through surveys of brokers who are contracted by households to buy and sell securities issued abroad. For example, there have been a number of instances where resident brokers were commissioned to handle transactions by residents in cases where there was an Initial Public Offering (IPO) abroad by a resident enterprise that may involve cross-listing of securities on the local stock exchange and a stock exchange abroad. In this case, the local stock exchange may have information on debt or equity securities issued abroad by resident enterprises.[23] In most countries, quick estimates were obtained in respect of all securities that are cross-listed on the domestic stock exchange as most transactions for these would be by residents acquiring nonresident cross-listed securities.

A summary of the best practices in the design of an enterprise survey as applied from *BPM6CG* in the project countries is presented in Table 3.

[23] This is a fairly recent development. The general experience of the EDDI project is that resident enterprises are unlikely to have access to securities markets abroad. For issues of international bonds, this is readily verified by reference to data published by the BIS. Where there is information on securities issued abroad by resident enterprises, it is generally assumed that the purchasers are nonresident. For this reason, information provided by local brokers of residents' purchases of securities issued abroad by resident enterprises is useful.

Table 3. Best Practices in the Design of an Enterprise Survey

Topic	Application of BPM6 Compilation Guide
Selecting a Survey Frame	• Include all listed companies and consult with main industry associations, large enterprise groups, and relevant government and public sector bodies such as those concerned with financial sector regulation and investment promotion, and export processing zones • Design the survey frame to comprise those enterprises likely to have access to international capital markets, which in practice is all enterprises that meet some threshold by size of foreign liabilities/assets. (This results in survey frames tending to be small.) • Start with a large survey frame that helps to distinguish between large and small enterprises. Confine subsequent annual surveys to large enterprises. In practice, countries often are able to conduct an annual survey only of large enterprises • Use exploratory surveys to identify enterprises by size of foreign liabilities/assets that may not otherwise have been included, and to exclude enterprises that no longer exist, for which an invalid address is on file, etc.
Questionnaire Design	• To meet the requirements of BPM6 use Form 18 in the draft BPM6CG for inward and outward direct investment supplemented by a separate section for the reporting of transactions and positions in other categories (e.g., inward and outward portfolio investment and a breakdown of external debt instruments) • Expand questionnaire to meet additional BOP requirements (such as services debits and credits and employee compensation), the currency of denomination of external debt instruments, and the needs of satellite accounts such as Foreign Affiliates Trade Statistics
Data collection	• In general, use mail-outs for data collection. However, because of poor response to mail-outs in earlier surveys, most countries (except Mauritius) now prefer to use enumerators to present and collect completed questionnaires as this ensures a high response given adequate sensitization. More widespread use of mail-outs is expected for large enterprises as experience builds up
Data Review	• Develop procedures to conduct consistency checks on completed questions and, where possible, check completed questionnaires against enterprise financial statements • Include data review tables in the database to permit scrolling through the database on an enterprise-by-enterprise basis to identify gaps and outliers
Grossing up Techniques	• Apply grossing up techniques in circumstances where an enterprise has reported in some periods but not others • Apply estimation techniques for individual enterprises that have not reported using financial statements for the enterprise in question
Portfolio Investment	• Use enterprise survey as the preferred data source for inward portfolio investment in unlisted companies and for all outward portfolio investment by enterprises • Use reporting by custodians, domestic securities markets, brokers, and partner country data as additional data sources for cross-border transactions and positions in securities. In practice, such reporting has been confined to domestic securities markets as the principal data source for inward portfolio investment in listed companies

IV. Lessons from the Experience of Ghana

Ghana and Mauritius have made the most progress in establishing an annual enterprise survey, compiling an annual IIP statement based on direct reporting, and integrating the IIP with the BOP financial account to ensure consistency. The following section is focused on lessons learned from the experience of Ghana in establishing an annual enterprise survey that is a core requirement by all participating countries.

At the start of the project in May 2010 it was proposed that the project build on what had been achieved under the previous project towards establishing an annual enterprise survey that will be used to revise the official BOP financial account and establish/revise the related IIP statement and external debt statistics, all of which would be posted on the website of the compiling agency. As with the previous project, the EDDI project was to address issues of survey frame, questionnaire design, sensitization initiatives, data collection issues, use of financial statements, problems of non-response, and database management issues. Supplementary objectives included (i) introducing a quarterly BOP enterprise survey, partly to ensure that first estimates of a revised BOP/IIP can be produced within three months of the reference date; (ii) the development of data sources for inward portfolio investment and other steps that can be taken to replace/supplement the ITRS as a data source for reporting BOP financial account transactions; and (iii) the publication of data for external debt broken down by instrument and currency of denomination (as recommended in the *External Debt Statistics Guide for Compilers and Users*). The questionnaire was also to be amended to accommodate Ghana's participation in the IMF's CDIS.

By the time the EDDI project was launched, the BOG had conducted two FPCF surveys. The first in 2008 used a questionnaire and developed a database, the latter using Access based data management software, modeled on software used by the Bank of Uganda. In the latter case, there was close consultation between the IT departments of the two institutions. The second in 2009 took account of lessons learned in the first survey, which had initially focused on identifying the enterprises that were most likely to engage in cross-border financing by employing various measures of size (such as the "top 100 companies") around which the initial frame was built. Efforts were subsequently made to find ways of expanding the survey frame to cover all enterprises that met some threshold by size of foreign liabilities/assets. An attempt was also made to apply grossing up techniques to estimate data for those of the top 100 companies that did not respond. However, as the available proxies to facilitate application of this procedure (such as size of tax payments or value added) did not correlate well with financial inflows, this procedure was not pursued, though grossing up estimates were provided. Among the major lessons learned was the recognition that a frame of no more than 300 enterprises should be more than adequate to cover those enterprises mostly likely to be engaged in cross-border financing, and that attention should be given to identifying within this frame a set of key enterprises, which, because of the size of their overseas funding, would require a 100 percent response to the survey questionnaire. By implication, the possible use of grossing up techniques would apply to the remaining enterprises.

The survey frame for the 2008 FPCF comprised about 280 enterprises drawn from leading companies for each sector of the economy using information from key regulatory and administrative institutions together with information provided by industry associations. The survey was given high visibility as it was launched with a workshop attended by CEOs and financial managers of selected entities and attended by the Governor and Deputy Governor of the BOG, the Chief Statistician of Ghana Statistical Services (GSS), and the CEO of the Ghana Investment Promotion Centre. Funding was also assured for a series of FPCF surveys on the assumption that it would take two or three surveys to produce reliable data on an annual basis on which reliance could be placed as a dependable source for BOP and IIP compilation. The funding allowed for an expansion of staff in the BOG BOP unit from eight to ten persons, plus two IT staff attached to the Research Department for the purpose of developing a database using appropriate data management software, in addition to funding to pay for enumerators conducting the field work. Although the survey response was impressive, at 70 percent, the quality of the data for some enterprises was considered poor owing to insufficient training of enumerators as well as difficulties faced by enterprises in understanding the questionnaire, which was considered too long. Nonetheless, the quality of data improved significantly during the editing phase which included a review of financial statements provided by most respondents.

For the 2009 FPCF, the opportunity was taken to shorten the questionnaire, increase the number of enumerators (with each covering no more than 20 enterprises), expand the training period for enumerators, expand the training and time dedicated to editing and follow-up issues, and reorganize staff responsibilities in the BOP unit. An important initiative was the undertaking of an exploratory survey earlier in the year along the lines recommended in the *BPM6CG* by adding an exploratory survey module designed by the BOG to an existing large frame enterprise survey conducted by the GSS. This was to be used as the primary source for identifying enterprises that met a threshold of foreign liabilities/assets that was then used to validate/expand the survey frame. A preliminary annual IIP statement was also compiled for the periods covered by the two surveys (2006, 2007, and 2008). For both the 2008 and 2009 FPCF surveys, reports were published on the website of the BOG.

Against this background, the first EDDI mission took place in November 2010 to review the results of the 2009 FPCF. Following the exploratory survey, the survey frame was increased to 320 enterprises, which comprised all enterprises that met the threshold set for size of foreign liabilities/assets based on the results of the Exploratory Survey. With the increased time allowed to complete the follow-up process, survey response increased to 85 percent. The mission addressed two sectors that appeared to be inadequately covered, which were construction, on which it was concluded from a review of financial statements that very little cross-border funding was taking place, and the oil and gas industry, for which the only information available was provided by the Ghana National Petroleum Corporation. The lack of data for the oil and gas sector was considered to be a major omission and demonstrated the importance of identifying major enterprises in capital intensive industries in which direct investment plays a significant role. The identification of such enterprises and efforts to secure their participation in the FPCF is clearly an important supplement to the focus on overall response rates.

Apart from this, it was concluded that the data now available from the FPCF surveys on an annual basis were good enough to support a major revision of published BOP and IIP statistics pending validation of external debt data for trade credits. In support of this, grossing up techniques were applied to ensure that consistent data were compiled for the years covered by the two FPCF surveys starting in 2007 and for the years immediately previous, for which administrative data sources had been used. The grossing up process took account of enterprises that had reported in some FPCF surveys and not in others, either as a result of changes in the survey frame, or in response (which improved with each survey). Preference was given to estimating for non-response on an enterprise-by-enterprise basis but estimates based on the application of up-rating techniques were also used, especially for earlier years for which the BOP data for cross-border financing were based on administrative data sources. The resulting BOP and IIP revisions in *BPM5* format were agreed for publication subject to the review of external debt data for trade credit being checked against financial statements. In preparation for the 2010 FPCF, which was being conducted at the time of the 2010 mission, the questionnaire was reviewed to improve its conformity with CDIS requirements, especially regarding the classification by country (and region in the absence of country detail) of creditor/debtor, as well as to take account of changes required to meet the needs of *BPM6*.

The second EDDI mission took place in September 2011 and reviewed the result of the 2010 FPCF, for which the survey frame had settled down to 300 enterprises. The mission found that most of the tasks recommended by the previous mission had been implemented and that improvements to the questionnaire and database software had been made to facilitate CDIS reporting. Little progress had been made to improve reporting by the oil and gas sector. The main achievement was agreement on the publication of revised BOP and IIP data by the BOG that included the results of all three FPCF surveys conducted to date in addition to the application of grossing up techniques for earlier years (to cover a total of five years). Estimates were included for direct investment through divested corporations (Ghana Telecom), oil exploration expenditures (reported as direct investment), and the use of data for depository corporations based on the BOG's monetary surveys and data for direct investment reported by the BOG Banking Supervision Department. It is worth emphasizing that the impetus to publish revised BOP financial account data fully integrated with related IIP data in the sense of being able to explain changes in the IIP in terms of BOP transactions, revaluations, and other volume changes was all the stronger because the data for both stocks and flows were taken from enterprise accounts.

The third EDDI mission took place in June 2012. Given that the primary goal of establishing an annual FPCF had been achieved, attention switched to reviewing data sources for compiling inward portfolio investment stocks and flows, and the scope for introducing a quarterly FPCF. For the former, revisions to the FPCF questionnaire had already been made to distinguish between portfolio investment in listed and unlisted companies. For the latter, the FPCF remained the only data source, for which reporting was based mainly on enterprise share registers. The valuation of such portfolio investment was reported in terms of shareholders capital in the absence of data for market valuations. The primary focus was therefore on the development of data sources for both equity securities and debt securities issued by listed companies and held by nonresidents as well as on debt securities issued by government and held by nonresidents, for which a work program was established.

V. Summary of Conclusions

The following summarizes the achievements and lessons learned of participating countries regarding the tasks that were set for the project.

The main tasks in the first three years of the EDDI project comprised steps needed to establish an **annual enterprise survey of cross-border financial flows and stocks** that would be used to compile an annual IIP. For countries deemed to have reliable ITRS data (Mozambique, Mauritius), ITRS data continued to be a preferred source for compiling BOP financial account transactions supplemented by estimates for non-cash transactions taken from the enterprise survey (such as for retained earnings). For all other participating countries with ITRS reporting systems showing signs of stress (Ghana, Kenya, Nigeria), a decision was to be made in the course of the project whether to use ITRS data or enterprise survey data as the preferred data source for the BOP financial account transactions of enterprises. For the one country with no ITRS reporting (The Gambia), the enterprise survey was to be the sole data source for compiling the IIP and the BOP financial account for enterprises.

- All six countries have **secured internal funding for annual enterprise surveys**, an important prerequisite to ensure the sustainability and ownership of the project. With this in mind, the project started with individual missions to each country to advocate high-level buy-in by the countries. Only after completing these missions was the opening workshop for the project conducted when work programs were designed and agreed among the countries.
- **Survey frames** are now well established in all countries, having been reviewed and strengthened with each survey, in some cases with the benefit of an exploratory survey (Ghana, Mozambique, and currently Mauritius), and some by using ITRS data sources to identify enterprises with significant cross-border financing (Mauritius, Mozambique). Within the survey frame, most countries have identified the major enterprises that account for the bulk of financing from abroad, for which a much higher response rate is targeted than for other enterprises. Generally, the smaller the country and the less access to cross-border financing, the easier the task of establishing a survey frame (e.g., The Gambia) and the larger the country and greater the access to cross-border financing, the more challenging the task of establishing a survey frame (e.g., Nigeria). For the most part, attempts to expand the survey frame to meet other stakeholder needs other than those of BOP/IIP compilation have been resisted.

- **Questionnaire design** has evolved in the course of the project. Three countries now use the *BPM6* compliant questionnaire for direct investment in the *Coordinated Direct Investment Survey Guide* expanded to include portfolio and other investment (The Gambia, Mauritius, Nigeria) and three use a questionnaire based on the current Bank of Uganda questionnaire (Ghana, Kenya, Mozambique). Because of the costs of conducting enterprise surveys, most countries have expanded the questionnaire to meet other stakeholder needs (who may have contributed to the funding).
- For **data collection**, following poor experience with mail-outs in earlier surveys, most countries (The Gambia, Ghana, Kenya, Mozambique, and Nigeria), have resorted to the expensive alternative of using regular and contract staff to deliver questionnaires to enterprises and collect completed questionnaires from them, which has tended to result in high response rates. Mauritius is the only country to successfully use a mail-out, though response by some major enterprises has been poor and follow up action is currently in progress. Because the use of enumerators is a major expense, all countries are exploring the partial use of electronic reporting by particular industries (such as companies listed on the stock exchange or industries where large enterprises predominate).
- **Data review and validation** has improved considerably in all countries in the course of the project. The use of financial statements to validate completed returns and estimates for non-response is now well established, and most countries have established a list of validation checks that are now required to complete the process of data review. Some countries (Ghana, Kenya, Mauritius, and Nigeria) either have or are in process of establishing databases that facilitate completion of the data review process by adding functionality that facilitates the process of scrolling through the database on an enterprise-by-enterprise basis to identify possible gaps and outliers.
- One country (Ghana) has successfully established a **database** using Access-based data management software in preference to the use of linked spread sheets, and three countries (Kenya, Mauritius, Nigeria) have established working groups with their information technology departments to develop a database based on appropriate data management software. The CBN has undertaken a study visit to the BOG to learn from its successful experience.
- Thus far, the use of **grossing up techniques** to ensure comparable data across surveys has been confined to Ghana and Mozambique. Other countries (The Gambia, Kenya, Mauritius, and Nigeria) are only now close to completing an enterprise survey that meets the requirements of the project (adequate survey frame, response, data review procedures), which have delayed the application of grossing up techniques to ensure comparable data across surveys.
- All countries produced a **preliminary IIP statement** drawn from their first enterprise survey and other data sources. Publication was deferred until the enterprise surveys were

deemed to be producing reliable data and firmly established on an annual basis. For all countries, this interval has provided time to improve existing data sources for inward portfolio investment, including nonresident purchases of government debt securities. They are therefore well placed to complete a published IIP statement based on direct reporting during the remaining months of the project. Ghana is the only country to have published revised IIP and BOP financial account data which take full account of the results of their enterprise surveys in which changes in the IIP can be readily explained by transactions in the reporting period, revaluations, and other volume changes. Mozambique comes close, but because transactions are derived from cash reporting and positions from accruals reporting, there is an element of errors and omissions in the reconciliation of changes in the IIP with transactions, revaluations, and other volume changes.

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International Monetary Fund
Statistics Department
700 19th Street NW
Washington, DC 20431
USA
Tel: 1-202-623-6039
Fax: 1-202-623-4072