



PARAGUAY

REPORT ON OBSERVANCE OF STANDARDS AND CODES

August 2014

This Report on the Observance of Standards and Codes—Data Module for Paraguay was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on July 29, 2014.

The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Paraguay or the Executive Board of the IMF.

The Response by the Authorities to this report and the Detailed Assessments Using the Data Quality Assessment Framework (DQAF) are also included.

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PARAGUAY

REPORT ON THE OBSERVANCE OF STANDARDS AND CODES (ROSC)—DATA MODULE VOLUME I

August 2014

The Report on the Observance of Standards and Codes (ROSC)—Data Module provides an assessment of Paraguay's macroeconomic statistics against the recommendations of the General Data Dissemination System (GDDS), complemented by an assessment of data quality based on the IMF's Data Quality Assessment Framework (DQAF) 2012. The DQAF lays out internationally accepted practices in statistics, ranging from good governance in data-producing agencies to practices specific to individual datasets.

The datasets covered in this Report are national accounts, consumer and producer price indices, government finance and public sector debt statistics, monetary statistics, and balance of payments and international investment position statistics. The agencies that compile the datasets assessed in this Report are the Central Bank of Paraguay (CBP) and the Ministry of Finance (MOF). The Directorate General of Statistics, Surveys, and Censuses (DGEEC) was also evaluated regarding prerequisites of quality and assurances of integrity.

The datasets to which this Report pertains can be accessed in print and on the Internet at:

CBP website (<http://www.bcp.gov.py>)

MOF website (<http://www.hacienda.gov.py>)

DGEEC website (<http://www.dgeec.gov.py>)

Approved By
**Louis Marc Ducharme and
Alejandro Werner**

Prepared By
The Statistics Department

This Report is based on information provided prior to and during a mission conducted from February 12 to 26, 2014 and on publicly available information. The mission team comprised Mr. Eduardo Valdivia-Velarde (Chief), Ms. Emma Angulo (Economist), Messrs. José Cartas and Alberto Jiménez de Lucio (Senior Economists), Mr. Michael Stanger (Economist), and Mr. Ricardo Davico (Senior Information Management Officer), all STA, and Mr. Rui Evangelista (Expert).

Paraguay is a member of the Mercado Común del Sur (MERCOSUR) or Common Market of the South, which also comprises Argentina, Brazil, Uruguay, and Venezuela.

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GLOSSARY

<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
<i>2008 SNA</i>	<i>System of National Accounts 2008</i>
<i>2013 EDSG</i>	<i>External Debt Statistics: Guide for Compilers and Users, 2013</i>
BOP	Balance of Payments
<i>BPM5</i>	Fifth edition of the <i>Balance of Payments Manual</i>
<i>BPM6</i>	Sixth edition of the <i>Balance of Payments and International Investment Position Manual</i>
CBP	Central Bank of Paraguay
CPI	Consumer Price Index
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPI	Consumer Price Index
DC	Depository Corporations
DGEEC	General Directorate of Statistics, Surveys and Census
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
GDDS	General Data Dissemination System
GFS	Government Finance Statistics
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
IIP	International Investment Position
ISIC	International Standard Industrial Classification of All Economic Activities
MFS	Monetary and Financial Statistics
<i>MFSCG</i>	<i>Monetary and Financial Statistics Compilation Guide, 2008</i>
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual, 2001</i>
MOF	Ministry of Finance
NA	National Accounts
NPISH	Nonprofit Institutions Serving Households
ODC	Other Depository Corporations
OFC	Other Financial Corporations
PPI	Producer Price Index
<i>PSDSG 2011</i>	<i>Public Sector Debt Statistics: Guide for Compilers and Users, 2011</i>
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard

OVERALL ASSESSMENT

1. Paraguay participates in the General Data Dissemination System (GDDS) since September 2001, and the metadata for its macroeconomic statistics are posted on the IMF's Dissemination Standards Bulletin Board (DSBB). Paraguay meets GDDS recommendations for the coverage, periodicity, and timeliness of data, with the following two exceptions: (i) in the financial sector, the depository corporations (DC) survey is compiled on a monthly basis with a one-month lag but is not disseminated; and (ii) in the external sector, the debt service payment schedules for both public and private external debt are not disseminated. Appendix I provides an overview of Paraguay's dissemination practices compared to the GDDS.

2. This Report on the Observance of Standards and Codes (ROSC)—Data Module provides an update of the assessment conducted in February 2006, which was based on the July 2003 version of the IMF's Data Quality Assessment Framework (DQAF). This ROSC Data Module is based on the May 2012 vintage of the DQAF. The Report covers six datasets, namely, national accounts (NA), consumer price index (CPI), producer price index (PPI), government finance statistics (GFS) and public sector debt statistics, monetary statistics, and balance of payments (BOP) and international investment position (IIP) statistics. The agencies that compile and disseminate these statistics are the Central Bank of Paraguay (CBP) for all datasets but GFS, which are compiled and disseminated by the Ministry of Finance (MOF). The General Directorate of Statistics, Surveys and Census (DGEEC) is the main statistical agency, which has the responsibility of coordinating and integrating all official statistical activities, and focuses mostly on the production of demographic and social basic statistics and indicators, mainly unemployment and poverty (datasets not covered in the Report).

3. Following the 2006 ROSC Data Module mission, Paraguay made significant improvements in the compilation and dissemination of macroeconomic statistics, but some shortcomings persist. The main achievements include (i) adequate methodological treatment of the two large binational hydroelectrical enterprises to properly reflect their contribution to Paraguay's GDP, BOP, and other international accounts; (ii) compilation and dissemination of quarterly national accounts and integrated economic accounts for the total economy up to net lending; (iii) new CPI series (December 2007=100) and PPI series (June 2011=100), with several methodological improvements (introduction of an adequate treatment of seasonal products and use of improved estimation techniques for missing prices); (iv) inclusion of credit unions in monetary statistics since end-2008, although these data are not included in domestic publications; and (v) easier data access through official websites and adoption of advance release calendars for most statistics. While recognizing these important improvements, the mission identified shortcomings in statistical practices and databases that have the potential to detract from accurate and timely analyses of economic and financial developments and the formulation of appropriate policies.

4. The remainder of this section presents the mission's main conclusions based on its assessment using the new IMF's DQAF 2012. The presentation is sequenced according to the DQAF's quality dimensions, by agency for the first two dimensions and across datasets for the remaining four.

5. Legal and Institutional Environment. The compilation and dissemination of statistics by the **Central Bank of Paraguay** is based on a legal framework that broadly supports mandatory data reporting by the financial sector and the confidentiality of the reported data. Human resources are minimally adequate for current statistical programs and insufficient to support important developmental work, particularly related to the adoption of new international methodological guidance for the compilation of national accounts, and BOP and IIP statistics. A fundamental issue is the appropriateness of a central bank compiling price statistics, particularly in a country moving towards an inflation targeting regime. While the legislation supports the compilation and dissemination of budget and accounting data by the **Ministry of Finance**, the institutional responsibility for compiling and disseminating GFS by the MOF is only supported by an internal MOF provision (which at the time of the mission was under review). Procedures for data sharing and coordination within the MOF and between the MOF and other data-producing agencies need to be improved. Resources at the MOF are clearly insufficient to compile comprehensive and timely GFS, especially if the MOF decides to migrate to the *Government Finance Statistics Manual 2001 (GFSM 2001)* methodology. The Statistical Law of 1942 created the organizational structure of the official statistical services and identified the **Directorate General of Statistics, Surveys, and Censuses** as the main statistical agency, with the responsibility for coordinating and integrating all official statistical activities. The Law specifies the mandatory character of data reporting and data confidentiality. However, the central role that the Law confers to the DGEEC has not materialized mainly due to its lack of autonomy and insufficient human, financial, and technological resources. For example, censuses and surveys are mostly financed by external loans and grants. The DGEEC concentrates mainly on the production of basic demographic and social statistics and indicators.

6. Assurances of Integrity. The **Central Bank of Paraguay** is a technical institution that has administrative and normative autonomy and is independent in its choice of data sources, methods, and data dissemination policies, within the limits of available resources. Processes and activities in the workplace ensure a culture that promotes institutional integrity. The terms and conditions for compiling statistics are specified in the relevant laws, which are available to the public. The **Ministry of Finance** produces GFS on an impartial basis, based on a culture of professional independence. While the terms and conditions for preparing and reporting budget execution data are known to the public, the terms and conditions under which GFS are compiled are not. In both institutions, rules provide clear guidelines on staff behavior and administrative procedures, which are made known to the staff.

7. Methodological Soundness. The methodologies for price indices and monetary statistics broadly follow current international methodological standards. National accounts and BOP statistics broadly follow the *System of National Accounts 1993 (1993 SNA)* and the fifth edition of the *Balance of Payments Manual (BPM5)*, respectively, and GFS are broadly in line with *A Manual on Government Finance Statistics, 1986 (GFSM 1986)*. While a program for implementing relevant recommendations of the *System of National Accounts 2008 (2008 SNA)* and the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)* is under development, no migration path to *GFSM 2001* has been adopted.

8. Accuracy and Reliability elements (source data, assessment of source data and statistical techniques) are, for the most part, appropriately treated in monetary statistics and to a lesser extent in price statistics. Improvements are needed in source data for all datasets, except monetary statistics, and in statistical techniques for national accounts and to a lesser extent GFS and BOP statistics. The assessment and validation of intermediate data and statistical outputs are generally adequate, but could be improved for GFS and monetary statistics.

9. Serviceability of the assessed statistics is broadly satisfactory, as confirmed by the results of a user survey conducted in the context of this assessment. Data are disseminated with the periodicity and timeliness recommended by the GDDS, with the exception of monetary statistics (where the DC survey is compiled monthly but not disseminated), and total external debt service schedule (where semiannual data covering the next four quarters and two subsequent semesters should be compiled and disseminated with a one- to two-quarters lag).¹ Publicly available information permits only partial reconciliation of the statistics across datasets. Regular reconciliation of datasets and closer interagency coordination will be required to enhance the intersectoral consistency of macroeconomic statistics. Statistical agencies have well established revision policies and practices for most datasets, but these are not communicated to the public.

10. Accessibility of all official statistics, except for GFS, has improved considerably since the 2006 ROSC Data Module mission, with the adoption of advance release calendars and a more user friendly official website at the CBP that permits easier retrieval of statistics. Metadata posted on national websites are not easily available for most datasets, and the metadata posted on the IMF's DSBB had not been updated since November 2004, despite significant changes made in the compilation and dissemination processes for most datasets during the past ten years.² Statistics are released simultaneously to all users, but assistance to users could also be improved for most datasets, for example, by providing sector-specific contact information.

11. At the request of the authorities, **Paraguay's current data dissemination practices were also reviewed against the requirements of the Special Data Dissemination Standard (SDDS).**³ A detailed description of Paraguay current practices against the SDDS is presented in Appendix IV of the accompanying detailed assessment document (Volume III). The following points about the coverage, periodicity, and timeliness prescriptions of the data dimension highlight several issues to be addressed prior to Paraguay's subscription to the SDDS:

- In the **real sector**, timeliness in data dissemination needs to improve as follows: (i) for the *PPI* from five weeks to one month after the end of the reference month; and (ii) for monthly *production indices*⁴ from nine to six weeks (one month is encouraged).

¹ The *External Debt Statistics: Guide for Compilers and Users, 2013 (2013 EDSG)* provides guidance to compile and disseminate external debt position data and debt service schedule.

² At the time of writing this report, revised GDDS metadata were posted on the DSBB for all macroeconomic datasets.

³ Comprehensive information on the SDDS can be found on the DSBB at <http://www.dsbb.imf.org>.

⁴ Monthly economic activity index (IMAE).

- In the **fiscal sector**, data need to be disseminated as follows: (i) annual *consolidated general government operations* disaggregated by major components within six months after the reference year (quarterly data with a one-quarter lag are encouraged); and (ii) quarterly *central government debt* with a one-month lag (disaggregated by remaining maturity, residency, instrument, and currency of issue). Timeliness in data dissemination needs to improve for monthly data on the *consolidated central government operations* from about 75 days (for year-end data) to one month after the reference month.
- In the **financial sector**, the *depository corporations survey* needs to be disseminated on a monthly basis with one-month lag; and (ii) daily data on *short-term and long-term interest rates on government securities* should also be disseminated.
- In the **external sector**, the *Template on International Reserves and Foreign Currency Liquidity* needs to be disseminated monthly with a one-month lag (one-week lag is encouraged).⁵

12. In addition, the SDDS encourages the dissemination of the following data missing for Paraguay's macroeconomic statistics:

- In the **real sector**, (i) quarterly *sectoral balance sheets* with a one-quarter lag and (ii) monthly or quarterly *forward-looking indicators* with a one-month or a one-quarter lag, respectively. In addition, the periodicity and timeliness in the dissemination of *savings* and *gross national income* needs to be improved from annual to quarterly data, and from a three-quarter to a one-quarter lag, respectively.
- In the **fiscal sector**, (i) quarterly *general government gross debt at nominal value* (disaggregated by debt instrument, currency, and residence of the creditor; and for memorandum items, general government debt securities and loans classified by remaining maturity, and debt securities at market value) and (ii) *debt-service projections* for long- and short-term debt with a three-month lag.
- In the **financial sector**, (i) monthly *disaggregated claims on other residents sector* with a one-month lag (broken down by other nonfinancial corporations and households/nonprofit institutions serving households (NPISH)).
- In the **external sector**, (i) quarterly total external debt (by currency, debt service payment schedule, and short-term remaining maturity) with a one-quarter lag;⁶ and (ii) quarterly BOP and IIP data disaggregated by *BPM6* standard components with a one-quarter lag.

13. Section II provides a summary assessment by agency and dataset based on a four-point rating scale. This is followed by staff recommendations in Section III. Practices

⁵ The *International Reserves and Foreign Currency Liquidity: Guidelines for a Data Template* (2013) provides guidance to compile and disseminate these data.

⁶ The 2013 EDSG provides guidance to compile/disseminate prescribed and encouraged SDDS external debt data.

compared to the GDDS are summarized in Appendix I. The authorities' response to this Report and a volume of detailed assessments are presented in separate documents.

ASSESSMENT BY AGENCY AND DATASET

14. Assessment of the quality of six macroeconomic datasets—national accounts, consumer price index, producer price index, government finance and public sector debt, monetary, and balance of payments and international investment statistics—were conducted using the May 2012 DQAF. In this section, the results are presented at the level of the DQAF elements and using a four-point rating scale (Table 1). Assessments of the prerequisites of data quality and assurances of integrity (Dimensions “0” and “1” of the DQAF) are presented by data-producing agency in Tables 2a–c. For each dataset, the assessment of methodological soundness, accuracy and reliability, serviceability, and accessibility (Dimensions “2” to “5” of the DQAF) are shown in Tables 3a–f.

15. In order to complement the Fund's assessment of the quality of official statistics, and with the assistance of the CBP, the mission conducted a survey of key users of macroeconomic statistics. Questionnaires were sent to a broad range of users, who were asked to evaluate the coverage, periodicity, timeliness, accessibility, and overall quality of the official statistics. Seventy-three targeted users submitted responses for a response rate of 23 percent. The 2006 ROSC Data Module mission conducted a similar survey, where 40 targeted users submitted responses.

16. On a five point scale (1 = poor and 5 = excellent), the average rating for the overall quality of official statistics for all sectors was 3.8.⁷ Most respondents felt that the statistics were reliable and expressed satisfaction with their methodological soundness. Respondents also indicated that they were generally satisfied with the level of coverage and detail as well as the periodicity. However, many felt that timeliness needs to be improved.

17. Some respondents underscored that (i) an interactive online database where users could select time series and frequency would facilitate data accessibility; (ii) metadata are not easily accessible for most datasets; (iii) the base year of national accounts statistics is outdated; (iv) the informal sector activity is poorly measured; (v) the geographical coverage of the CPI should extend beyond the Greater Asunción Area; (vi) GFS should cover the entire public sector rather than only the central government; (vii) the coordination between the CBP and the MOF should improve, particularly on external debt statistics; (viii) BOP statistics do not capture cross-border trade and capital flows accurately; (ix) trade data are lacking good estimates of informal trade; and (x) data on direct investment abroad is unavailable and direct investment in Paraguay may be underestimated.

18. A more detailed analysis of the Users' Survey and the tabulated results are included in Appendix V of the accompanying document *Volume III: Detailed Assessments Using the Data Quality Assessment Framework (DQAF)*.

⁷ In the 2006 users' survey, the overall rating for the quality of official statistics for all sectors was 3.2.

Table 1. Data Quality Assessment Framework 2012—Summary Results

Key to symbols: O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; NA = Not Applicable							
Dimensions/Elements		Datasets		Producer Price Index	Government Finance Statistics	Monetary Statistics	Balance of Payments Statistics
		National Accounts	Consumer Price Index				
0. Prerequisites of quality							
0.1	Legal and institutional environment	LO	O	O	LNO	LO	LO
0.2	Resources	LNO	LO	LO	LNO	LO	LO
0.3	Relevance	LO	O	O	LO	LO	LO
0.4	Other quality management	O	O	O	LO	LO	LO
1. Assurances of integrity							
1.1	Institutional integrity	O	O	O	LO	O	O
1.2	Transparency	O	O	O	O	O	O
1.3	Ethical standards	O	O	O	O	O	O
2. Methodological soundness							
2.1	Concepts and definitions	LO	O	LNO	LNO	O	LO
2.2	Scope	LNO	LO	LNO	LNO	LNO	LO
2.3	Classification/sectorization	LO	O	O	LNO	LO	LO
2.4	Basis for recording	LO	O	O	LO	O	LO
3. Accuracy and reliability							
3.1	Source data	LNO	LO	LO	LO	O	LO
3.2	Assessment of source data	LO	LO	LO	LO	O	O
3.3	Statistical techniques	LNO	O	O	LO	O	LO
3.4	Assessment and validation of intermediate data and statistical outputs	O	O	O	LO	LO	O
3.5	Revision studies	LO	LO	LO	LO	LO	LO
4. Serviceability							
4.1	Periodicity and timeliness	O	O	O	O	LO	O
4.2	Consistency	O	O	O	LO	O	LO
4.3	Revision policy and practice	LO	LO	LO	LO	LO	O
5. Accessibility							
5.1	Data accessibility	O	O	O	LO	O	O
5.2	Metadata accessibility	LO	LO	LO	LNO	O	LO
5.3	Assistance to users	LO	LO	LO	LO	LO	O
<p>Practice observed: Current practices generally meet or achieve the objectives of DQAF internationally accepted statistical practices without any significant deficiencies. Practice largely observed: Some departures, but these are not seen as sufficient to raise doubts about the authorities' ability to observe the DQAF practices. Practice largely not observed: Significant departures and the authorities will need to take significant action to achieve observance. Practice not observed: Most DQAF practices are not met. Not applicable: Used only exceptionally when statistical practices do not apply to a country's circumstances.</p>							

Table 2a. Assessment of Data Quality—Dimensions 0 and 1—Central Bank of Paraguay

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment The compilation of statistics by the CBP is supported by Law 489/95 (<i>Organic Law of the Central Bank of Paraguay</i>), which includes: (i) provisions for mandatory data reporting by public and private entities to the CBP for performing its functions (art. 80); (ii) provisions governing the preparation and publication of monetary and financial data, external payments, domestic prices, output and income (art. 82); and (iii) provisions establishing the obligation to maintain the secrecy and confidentiality of the requested data (arts. 6, 7, and 8, as well as the CBP's <i>Information Security Regulations of 1997</i>). In cases of noncompliance, the law contemplates sanctions and fines for financial institutions and their managers (arts. 94, 95, and 96). The obligation of nonfinancial sector entities to report statistics to the CBP is not well established, which affects the quality of BOP and national accounts statistics.</p> <p>Resources Staff resources allocated to the compilation of statistics are minimally sufficient. They can perform ongoing tasks, but are clearly not enough for supporting important developmental work (such as migration to the 2008 <i>SNA</i> and <i>BPM6</i>), conduct required surveys, improve source data and estimation techniques, or verify and analyze data quality. Units responsible for statistics have suffered a high turnover of technical staff.</p> <p>Relevance The CBP maintains informal contacts with users and promotes staff participation in international seminars and conferences. There are no formal mechanisms to consult with users about the relevance of the statistics or to identify emerging data requirements.</p> <p>Other quality management CBP's authorities are aware that continued efforts are needed to improve the quality of the statistics, as evidenced, e.g., by their willingness to implement IMF missions' recommendations. However, statistical functions are given low priority in terms of resource allocation. Systematic processes to focus on data quality during the planning of the statistical programs are needed.</p>	<p>Institutional integrity The CBP is a technical institution with administrative and normative autonomy. Technical criteria alone are applied by compilers and they are totally independent in their choice of data sources, methods, and data dissemination policies, within the limits of available resources. Processes and activities in the workplace promote a culture of professionalism. The CBP is authorized to comment, clarify, and correct erroneous interpretations or misuse of statistics by users or by the media.</p> <p>Transparency The broad legal terms and conditions for compiling statistics are specified in the relevant laws, which are available to the public. Government officials outside the CBP have no access to the information until it is released to the general public. Some internal informative reports are shared with the MOF, without affecting the dissemination cycle. The CBP's statistical products are clearly identified as such and advance notice is given of major changes in the conceptual framework, source data, and statistical techniques when applicable, such as the introduction of the new reference year for the CPI and PPI or the change in treatment of the binational hydroelectrical enterprises.</p> <p>Ethical standards The <i>Information Security Regulation</i>, approved by the CBP Board in July 1997, establishes rules of conduct designed to minimize the risk of human error, theft, fraud, or misuse of information. The Regulation imposes disciplinary sanctions against officials who fail to comply with these provisions. In April 2013, the CBP implemented the information security management system of the international standard ISO/EIC 27001. The <i>Personnel Statute</i> and its <i>Regulation</i>, approved by the CBP Board in September 1989 and February 1990, respectively, establish the rights and responsibilities of CBP staff, including the selection process, promotions, performance reviews (discontinued in recent years), and confidentiality. An <i>Ethic Code</i>, approved in 2008, has been distributed to staff, which had to acknowledge its reception.</p>

Table 2b. Assessment of Data Quality—Dimensions 0 and 1—Ministry of Finance

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment The mandate to compile and disseminate budget execution data is assigned by law to the MOF, but there is no similar mandate for government finance statistics (GFS). Previous assignment of the responsibility to compile and disseminate GFS to a unit within the MOF is no longer in effect, though the unit continues to perform the task. Working arrangements within the MOF provide timely flow of source data. Data sharing and coordination among data-producing agencies are adequate, but could be improved by establishing more formal mechanisms. Data confidentiality and mandatory reporting are supported by law.</p> <p>Resources Staff resources are currently insufficient to compile GFS for the general government sector and public sector according to international standards. High turnover of personnel adversely affects efficiency. No formal processes are in place to ensure efficient use of resources or measure the cost of producing GFS.</p> <p>Relevance The MOF meets the information requirements established in the corresponding national legislation and partially meets the statistical needs of international organizations. Other users' needs are not identified. There is no structured process of consultation with users to review the usefulness of GFS.</p> <p>Other quality management There is a general concern for quality, but no formal processes to assess or ensure its attainment. Efforts are made to improve the quality of GFS, but not in a systematic manner.</p>	<p>Institutional integrity GFS are produced on an impartial basis, based on a culture of professional independence. Recruitment and promotion of staff are undertaken on a competitive process. The choice of data sources and statistical techniques, although not dissemination, are based solely on statistical considerations. MOF can and does comment on erroneous interpretation of statistics.</p> <p>Transparency The terms and conditions under which budget execution data are compiled and disseminated are available to the public; however, the corresponding terms and conditions for GFS are not. There is no prior access to the statistics by other government agencies and data products are clearly identified. Data released to the public are clearly identified as the data agency's product.</p> <p>Ethical standards Guidelines for staff behavior are provided and are known to the staff. In addition to the law applicable to civil servants, which addresses appropriate behavior, the MOF has issued a <i>Code of Ethics</i> and a <i>Code of Good Governance</i> in 2012. The <i>Code of Ethics</i> presents the ethical principles, ethical values, and ethical guidelines that staff must follow. The <i>Code of Good Governance</i> applies to the Minister and his senior management team. It specifies the policies to be followed by senior officials in the course of managing the institution.</p>

Table 2c. Assessment of Data Quality—Dimensions 0 and 1—Directorate General of Statistics, Surveys, and Censuses

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment Decree Law 11126/42 establishes the organizational structure of the official statistical services, identifying the DGEEC of the Secretariat of Planning as the main statistical agency with the responsibility of coordinating the statistical activities of all government agencies. The DGEEC has a mandate to conduct national surveys and censuses, and to disseminate statistical data. The Decree establishes the obligation to provide the information requested by the DGEEC, with legal provisions to protect the secrecy and confidentiality of the information received. Decree 15415/70 established an ad-hoc statistical council, dependent from the DGEEC, intended to coordinate the statistical work among government bodies. In 2008, Decree 11918 modified the organic and functional structure of the DGEEC, granting it budgetary autonomy. The role given by the statistical laws to the DGEEC has not been enforced, due mainly to insufficient institutional and political support.</p> <p>Resources Available resources in terms of staff (93 permanent and 150 contractual employees), computing resources, infrastructure, and financing seem to be not commensurate with the statistical program. Most activities of the DGEEC (among them the last population census) have been financed by international agencies through loans and grants. The repeating (due to logistic problems) of the population census in a simplified manner will be financed with own resources.</p> <p>Relevance The DGEEC concentrates on the production of demographic and social basic statistics and indicators, mainly unemployment and poverty. Its last two products, the national economic census in 2010 and the population census in 2012, suffered from a number of shortcomings.</p> <p>Other quality management The DGEEC authorities are aware of the need to organize an effective national statistical system. Their efforts focus on the adoption of a new National Statistics Law, which should provide the overarching framework for the compilation and dissemination of statistics in the country.</p>	<p>Institutional integrity Technical criteria alone are applied in the compilation of national surveys, censuses, and publication of statistics. The compilers are independent in their choice of data sources and methods, within the limits of available resources. The DGEEC is authorized to comment, clarify, and correct erroneous interpretations or misuse of statistics by users or by the media.</p> <p>Transparency The terms and conditions under which statistics are collected, processed, and disseminated are available to the public on the DGEEC website. Disseminated data are identified as the product of the DGEEC.</p> <p>Ethical standards Staff behavior is guided by the <i>Law on Public Servants</i> and by DGEEC's regulations. The regulations impose disciplinary sanctions against officials that fail to comply with the established provisions.</p>

Table 3a. Assessment of Data Quality—Dimensions 2 and 5—National Accounts

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. National accounts (NA) are compiled in broad accordance with the 1993 SNA. A program for changing the outdated base year (1994=100) and implementing relevant 2008 SNA recommendations is under development.</p> <p>Scope. The production boundary is broadly in line with the 1993 SNA and recently included the two binational hydroelectrical enterprises following the 2008 SNA. Nonetheless, there are no independent estimates of the non-observed economy after 1997, and mineral exploration and own-account production are mostly excluded. Annual and quarterly GDP are published by the production and expenditure approaches (at current and constant 1994 prices), and annual GDP by the income approach. The CBP compiles the sequence of accounts for the total economy up to the capital account according to the 1968 SNA. Supply and use tables were compiled for 1991-1997, but discontinued, and the rest of the world and institutional sector accounts are not compiled.</p> <p>Classification/sectorization. National classifications of economic activities and products are both linked to the ISIC Rev. 3 and the central product classification (CPC) respectively. COICOP and COFOG are not used. Gross fixed capital formation is classified by type of asset, but not by economic activity.</p> <p>Basis for recording. Market prices are used for valuation. Most transactions are recorded on an accrual basis. Data are collected at enterprise level; therefore, inter-establishment transactions within an enterprise are recorded on a net basis.</p>	<p>Source data. A comprehensive data collection program for NA compilation is not in place. No annual surveys are available, but information on production and sales are collected from government offices and from some relevant enterprises. New benchmark statistics (population and economic censuses and an updated business register) are publicly available but not used for the NA compilation. Access to tax data has increased during the last years. There is insufficient data for some industrial activities, most services, household consumption, and changes in inventories.</p> <p>Assessment of source data. Accuracy of source data is assessed against available information along the revision cycle of the accounts.</p> <p>Statistical techniques. Due to the lack of necessary source data, excessive use is made of fixed coefficients for value added and households consumption; changes in inventories are obtained as residuals; monitoring the importance of informal activities is not done; and supply and use tables were discontinued. However, some sound techniques are applied.</p> <p>Assessment and validation of intermediate data and statistical outputs. Intermediate data and outputs are cross checked and validated against related available information.</p> <p>Revision studies. Revisions are carried out on an ad-hoc basis and documented for users, but no revision studies are performed on a systematic basis.</p>	<p>Periodicity and timeliness. Annual and quarterly GDP meet GDDS recommendations.</p> <p>Consistency. Consistent GDP estimates from production, expenditure, and income (only in current prices) are reached by deriving some components residually. Temporal consistency is achieved by benchmarking quarterly estimates to their corresponding annual counterparts. Minor discrepancies with the GFS relate to sectorization. Employer social insurance schemes are included in the financial sector in NA and the government sector in GFS. Minor discrepancies with BOP statistics.</p> <p>Revision policy and practice. A schedule for the cycle of publications of the different versions of the national accounts is released and followed. Preliminary data are clearly identified. Revisions are not analyzed nor described when new versions are released. Causes of differences between revised and preliminary data are made public at the press release only.</p>	<p>Data accessibility. NA statistics are disseminated in a clear and detailed manner, and are easily accessed on the CBP website. An advance release schedule is published on the CBP website. NA statistics are made available to all users simultaneously. Non-disseminated statistics are provided upon request subject to availability and confidentiality.</p> <p>Metadata accessibility. Metadata are disseminated for various set of NA statistics, with different levels of detail, through technical notes, some of which are also posted on the CBP website. GDDS metadata had not been updated since 2004. Revised national accounts metadata were posted on the IMF's DSBB in March 2014.</p> <p>Assistance to users. Effective assistance is given to users on request. No specific contact point for national accounts is provided, but there is a general contact point for the CBP as a whole. Assistance to users is not monitored. NA publications and a list of papers (some related to NA) are available on the website and in the CBP's library. Publications are free of charge.</p>

Table 3b. Assessment of Data Quality—Dimensions 2 and 5—Consumer Price Index

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. The concepts and definitions used in the CPI are largely in accordance with the <i>Consumer Price Index Manual 2004</i>. The basket of goods and services has a sufficient level of detail for the analysis of price movements.</p> <p>Scope. The CPI measures the change in prices of a new basket of 450 products, which is representative of the final consumption expenditures of the urban households of the Greater Asunción Area. CPI weights include own-account production of market goods and services and goods received as salary in kind. The imputed value of owner-occupied housing is excluded from the CPI.</p> <p>Classification/sectorization. The COICOP classification is appropriately used to categorize CPI data.</p> <p>Basis for recording. The prices used in the CPI correspond to market prices and include all taxes levied on purchased goods and services. Following international best practices, prices of defective products and discriminatory price reductions are not collected. The weights for vehicles traded in secondary markets are based on the net purchases principle, according to international practices.</p>	<p>Source data. The basket of goods and services and CPI weights are derived from the 2005–2006 Household Budget Survey, which may not reflect actual consumption patterns. CPI weights should be updated at least every five years. Prices are collected monthly in a sufficiently large sample of outlets for CPI compilation. Periodicity and timeliness of the price collection survey is in line with best practices.</p> <p>Assessment of source data. The CPI data processing system includes procedures to detect outliers, and abnormal price variations are subject to confirmation (and not to automatic deletion). Sampling errors are not routinely quantified.</p> <p>Statistical techniques. The CPI uses internationally accepted formulas both at higher and lower aggregate levels. Prices of temporarily missing, permanent, and seasonal products are adequately imputed using price movements of different varieties of the same product or, if the number of available observations is low, of different product varieties within the same group of the missing product. Quality adjustments are made following recommended international practices.</p> <p>Assessment and validation of intermediate data and statistical outputs. The CPI by product is validated against comparable PPI series. The software used in the compilation of the CPI produces reports with outlying price variations that are investigated and corrected, if necessary.</p> <p>Revision studies. Weight revisions are not periodically analyzed to investigate the effects of substitution bias on the CPI.</p>	<p>Periodicity and timeliness. The CPI meets the GDDS recommendations. It is compiled on a monthly basis and disseminated within one week after the end of the reference month.</p> <p>Consistency. Inflation results are identical regardless of the order of aggregation used. A consistent monthly CPI series starting in December 1994 is available on the CBP website. In addition to the overall index, two-digit COICOP division group index numbers are also provided.</p> <p>Revision policy and practice. CPI data are considered definitive after being produced and, as such, they are not subject to revisions. Weight updates are irregular and infrequent.</p>	<p>Data accessibility. CPI results are presented monthly through a press release and a report (<i>Informe de Inflación</i>) containing tables, figures, and a detailed analysis of the inflation. Additional inflation measures are presented to facilitate users' analysis. An advance release calendar for the CPI is available on the CBP website.</p> <p>Metadata accessibility. The methodology of the current CPI is available on the CBP website. It includes not only information on key features of the CPI but also historical information on the previous series. GDDS metadata had not been updated since 2004. Revised CPI metadata were posted on the IMF's DSBB in March 2014.</p> <p>Assistance to users. The CBP website offers several publications where CPI figures can be obtained. Material aimed at raising awareness of the CPI and other statistics among school-age population are also available on the CBP website (<i>BCP Educa</i>). CPI publications do not identify contact points where specific enquiries on the CPI could be sent.</p>

Table 3c. Assessment of Data Quality—Dimensions 2 and 5—Producer Price Index

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. The concepts and definitions used in the PPI are largely in accordance with the <i>1993 SNA</i>. Following the <i>2004 PPI Manual</i>, the PPI should represent the total value of domestic production including exports; however, exports are excluded from the PPI. Conversely, import prices should be excluded from the composition of the PPI, as they do not represent domestic production.</p> <p>Scope. The PPI covers the output produced by resident enterprises in the agriculture, forestry and fishing, mining and quarrying, and manufacturing activities. The PPI does not cover relevant domestic activities (e.g., electricity and water supply, construction, and other services).</p> <p>Classification/sectorization. The classifications applied in PPI production follow international standards. Economic activities and products are classified using the <i>ISIC Rev.3</i> classification and the <i>CPC</i>, respectively.</p> <p>Basis for recording. The market output of domestically produced goods is appropriately valued at producer's prices.</p>	<p>Source data. PPI weights are derived using information from supply and use tables, complemented with administrative records from the MOF and other sources. Available data do not allow for a comprehensive coverage of produced output. The periodicity and timeliness of source data is in line with international standards.</p> <p>Assessment of source data. Prices data are filtered to minimize coding and editing errors and to identify outlying price observations. Sampling errors are not routinely quantified.</p> <p>Statistical techniques. The PPI uses internationally accepted formulas both at higher and lower aggregate levels. Prices of missing products are adequately imputed using price movements of different varieties of the same product or, if the number of available observations is low, of different product varieties within the same group of the missing product. Quality adjustments are made using recommended international practices.</p> <p>Assessment and validation of intermediate data and statistical outputs. Intermediate CPI prices data are validated using comparable PPI information.</p> <p>Revision studies. The update of PPI weights is not carried out on a regular basis.</p>	<p>Periodicity and timeliness. The PPI meets the GDDS recommendations. It is compiled monthly and disseminated within five weeks after the end of the reference month.</p> <p>Consistency. PPI results are invariant to the order of aggregation used in its compilation. A consistent monthly PPI series starting in December 1995 is available on the CBP website.</p> <p>Revision policy and practice. PPI data are considered final after being produced. The impact of major revisions (e.g., weight and basket updates) are carried out without a predetermined calendar.</p>	<p>Data accessibility. The PPI is disseminated together with the CPI. An analysis of the behavior of the PPI is available in a separate section of a monthly economic report (<i>Informe Económico</i>), which is posted on the CBP website. An advance release calendar for the PPI is available on the CBP website.</p> <p>Metadata accessibility. The methodology of the current PPI is available on the CBP website. The methodology includes not only information on the characteristics of the current PPI but also historical information on the previous series. GDDS metadata had not been updated since 2004. Revised PPI metadata were posted on the DSBB in March 2014.</p> <p>Assistance to users. Publications with PPI data are posted on the CBP website. They do not identify a specific contact point where enquiries on this indicator could be made.</p>

Table 3d. Assessment of Data Quality—Dimensions 2 and 5—Government Finance Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. GFS compilation and dissemination practices are based on the <i>GFSM 1986</i> and not the <i>GFSM 2001</i> methodology, and no migration path has been adopted. Compilation of debt data is partially based on the <i>Public Sector Debt Statistics: Guide for Compilers and Users (PSDSG)</i> guidelines.</p> <p>Scope. GFS cover only budgetary central government. Data for other levels of government are available, but not disseminated. There are no data for other economic flows or balances and only partial data for stocks (including debt).</p> <p>Classification/sectorization. Classification of flows and stocks does not follow <i>GFSM 2001</i>. Definition of the social security and nonfinancial public corporations subsectors is not in accordance with international definitions. Classification of debt follows partially the guidelines of the <i>PSDSG</i>.</p> <p>Basis for recording. Not all flows and stocks are valued on a market basis. Recording is done on a mixed cash and commitment basis. There are no arrangements to convert to accrual basis.</p>	<p>Source data. Data for most public units are comprehensive and timely. Most public sector units report online to the integrated financial management system. However, data are not available for all flows and stocks recommended by <i>GFSM 2001</i> and <i>PSDSG</i>.</p> <p>Assessment of source data. Source data are not regularly assessed against other related data sources.</p> <p>Statistical techniques. Some data are still entered manually to compile GFS. Compilation procedures are not fully documented. Bridge tables are used to report GFS in <i>GFSM 2001</i> format for the IMF's <i>GFS Yearbook</i>.</p> <p>Assessment and validation of intermediate data and statistical outputs. Intermediate results and intermediate data should be more fully validated against other data sources. Statistical outputs should be compared on a regular basis among national compilers.</p> <p>Revision studies. No formal studies of data revisions are conducted, and adequate documentation on revisions is not maintained.</p>	<p>Periodicity and timeliness. Data on central government operations and central government debt meet GDDS recommendations.</p> <p>Consistency. The overall surplus/deficit and financing are not consistent. GFS are consistent over time, but are not reconciled with other macroeconomic datasets on a regular basis.</p> <p>Revision policy and practice. Revision cycle (replacement of preliminary data by final data) follows a regular schedule, but is not explicitly made known to the public. Preliminary data are clearly identified. Some data assessments are conducted, but no formal studies of data revisions are conducted or disseminated.</p>	<p>Data accessibility. GFS are not disseminated according to standard <i>GFSM 2001</i> and <i>PSDSG 2011</i> components and no commentaries on current period developments are provided. GFS are not disseminated in user friendly formats, and no access to GFS through an electronic database is provided. GFS are not released according to a preannounced schedule. GFS are made available to all users simultaneously. Availability of additional statistics and the procedures to obtain them are not made known to the public.</p> <p>Metadata accessibility. No metadata are available on the MOF website, and there is no link to the GDDS metadata posted on the IMF's DSBB. The GDDS metadata were last updated in 2004.</p> <p>Assistance to users. A contact point for the Under-Secretariat of Economy is provided (in the form of an e-mail address for enquiries), but there is no specific contact point for GFS. There is no single list of MOF publications; users have to search by Under-Secretariat and Directorate.</p>

Table 3e. Assessment of Data Quality—Dimensions 2 and 5—Monetary Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. As a result of MFS missions that followed the 2006 ROSC Data Module, monetary statistics are consistent with the <i>MFSM</i> and the <i>MFSCG</i>.</p> <p>Scope. The DC survey covers the CBP, the 16 commercial banks, and the 11 finance companies. Credit unions are not yet included in the monetary statistics published by the CBP. The CBP does not compile the other financial corporations (OFC) survey.</p> <p>Classification/sectorization. The classification and sectorization of financial instruments follow the <i>MFSM</i>, with two exceptions: (i) no breakdown between other nonfinancial corporations and households/NPISHs, and (ii) nonsectorization of accrued interest by other depository corporations (ODC).</p> <p>Basis for recording. The DC survey is produced on an accrual basis, which is consistent with the <i>MFSM</i>. Financial instruments are recorded at market value.</p>	<p>Source data. The DC survey is based on the consolidated balance sheets of the CBP, commercial banks, and finance companies. Commercial banks and finance companies report to the Bank Superintendence (SB), which electronically transmits the aggregated data to the Monetary Studies Division (DEM).</p> <p>Assessment of source data. ODC reporting is based on a common chart of accounts introduced in 1995, which follows international accounting standards. Source data were improved along the recommendations of several MFS missions.</p> <p>Statistical techniques. Sound statistical techniques are used. Monetary data are based on the balance sheets of the CBP and ODC. The CBP does not use other secondary sources.</p> <p>Assessment and validation of intermediate data and statistical outputs. Verifications are performed only when inconsistencies are observed. Because of lack of disaggregated data, the DEM does not check the consistency of the interbank position, nor of the domestic public debt. Data consistency checks are performed for international reserves and net foreign assets against BOP statistics.</p> <p>Revision studies. The CBP does not have a policy of regular revision studies to monitor monetary statistics. Improvements have been introduced in response to requests by users.</p>	<p>Periodicity and timeliness. Monetary aggregates and central bank data meet GDDS recommendations. However, although compiled on a monthly basis, the DC survey is not disseminated as recommended by the GDDS.</p> <p>Consistency. Monetary data published by the CBP are released in consistent historical series. Aggregate ODC data are consistent with CBP’s accounting records. Monetary data are consistent with international reserves data, but not with banking positions in the IIP. Most inconsistencies with central government debt data were eliminated when the government debt with the CBP was consolidated in a perpetual bond.</p> <p>Revision policy and practice. The CBP does not have a regular revision schedule (which does not usually apply for monetary statistics) and does not perform revision studies. Notes in the tables inform when data are revised because of mistakes, but do not explain the reasons for the revision.</p>	<p>Data accessibility. Data are presented in an aggregated form with detailed explanatory notes. There are no preannounced release calendars, but monetary data are regularly posted on the CBP website by the 25th of the following month, and central bank data on the 10th of the following month.</p> <p>Metadata accessibility. Paraguay has posted its monetary metadata on the IMF’s DSSB, but metadata were not updated since November 2004. At the time of the mission, the CBP sent revised MFS metadata, which were posted on the DSBB in March 2014. The CBP website provides a link to the DSBB. Methodological notes accompany the tables published in <i>Informe Económico</i>.</p> <p>Assistance to users. Information on a contact person/point for monetary statistics is not available on the CBP website. All data are available online in an Excel format. The CBP website has a window encouraging users to send requests and comments, but this is not specific for statistics.</p>

Table 3f. Assessment of Data Quality—Dimensions 2 and 5—Balance of Payments Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. External sector statistics follow the guidelines of <i>BPM5</i>, and there is no formal plan to implement <i>BPM6</i>. Since 2012, the two binational hydroelectrical enterprises are considered 50 percent residents in Paraguay, in line with the methodology of <i>BPM6</i>.</p> <p>Scope. The scope of the BOP and IIP is broadly consistent with <i>BPM6</i>. Most resident-nonresident transactions and positions are covered in the BOP and IIP, respectively.</p> <p>In the last years, the response rate of the surveys to the nonfinancial private sector has decreased.</p> <p>There is a project to collect data on direct investment in real estate.</p> <p>Classification/sectorization. Classification and sectorization systems are in line with <i>BPM5</i>. Data by sector are not disseminated for most BOP and IIP components. Imports and exports of the maquila sector are included in goods for processing.</p> <p>Basis for recording. Data are mostly valued at market prices, except for some items such as portfolio investment. Interest on public sector debt is not recorded on an accrual basis. Grossing/netting procedures are broadly consistent with <i>BPM6</i>.</p>	<p>Source data. The main data sources include administrative records, direct reporting from private enterprises, and surveys mainly for direct investment. Coverage of services and financial assets and liabilities of the nonfinancial private sector is not sufficient. Source data are timely.</p> <p>Assessment of source data. The source data are analyzed for underreporting to check temporal consistency and consistency with related data sources.</p> <p>Statistical techniques. The CBP estimates unrecorded trade, smuggling, travel, and transport. Some compilation procedures need to be updated.</p> <p>Assessment and validation of intermediate data and statistical outputs. Survey data are regularly validated against balance sheets of the nonfinancial private enterprises and customs data against the Direction of Trade Statistics (DOTS). External trade data are reconciled with partner countries within MERCOSUR.</p> <p>Revision studies. Regular revision studies are not conducted. The CBP analyzed the data revision when data from the binational hydroelectrical enterprises were incorporated to external sector statistics.</p>	<p>Periodicity and timeliness. Periodicity and timeliness of BOP and IIP data meet the GDDS recommendations. Quarterly data are disseminated with at three-month lag. External debt position data are also disseminated quarterly.</p> <p>Consistency. BOP and IIP data are consistent. A reconciliation table is disseminated regularly on the CBP website. The item net errors and omissions is relatively unstable over time. There are inconsistencies between the income account and the IIP. The banking sector positions in the IIP are not consistent with MFS. There are discrepancies with government external debt data disseminated in the World Bank's Quarterly External Debt Statistics (QEDS) database, because these data are including the central administration debt only.</p> <p>Revision policy and practice. The revision cycle is predetermined; data are preliminary during eight quarters. Users are informed whenever data are preliminary.</p>	<p>Data accessibility. BOP and IIP statistics are disseminated on the CBP website according to <i>BPM5</i>. Data are disseminated in a clear manner providing time series of sufficient length. Data are released to all users at the same time. These statistics are released punctually following a schedule announced in advance.</p> <p>Metadata accessibility. BOP and IIP metadata (although not comprehensive) are published in the CBP's monthly economic bulletin. GDDS metadata need to be updated. Revised external sector statistics metadata were posted on the DSBB in April 2014.</p> <p>Assistance to users. Prompt and knowledgeable service and support are available to users of statistics. Contact points are available but not easily accessible.</p>

STAFF'S RECOMMENDATIONS

19. Based on the review of statistical practices, discussions with the data-producing agencies, and responses from data users (see Appendix V of the Detailed Assessments volume), the mission has developed a set of recommendations. They are designed to further increase Paraguay's adherence to internationally-accepted statistical methodologies and practices and their implementation would, in the mission's view, enhance the analytical usefulness of the country's macroeconomic statistics. Additional technical suggestions are included in the Detailed Assessments volume.

Cross-cutting recommendations

High Priority

- Give higher priority to statistical functions and promote the adoption of a modern Statistics Law that clearly assigns responsibilities among data-producing agencies.
- Provide adequate staff resources and other resources to assure the timely and sustainable compilation and dissemination of statistics in accordance with current international standards.
- Improve and institutionalize data sharing and overall coordination between the different agencies collecting source data needed for macroeconomic statistics.
- Establish regular mechanisms for enhancing intersectoral data consistency.

Other key recommendations

- Update and maintain current the metadata available in national publications as well as the GDDS metadata posted on the IMF's DSBB.
- Develop a medium-term plan to subscribe to the SDDS by 2017.
- Further enhance data and metadata accessibility of all datasets, including adequate formats for data dissemination and sector-specific contact information on the CBP and MOF websites.
- Strengthen data revision policies and practices and make them known to the public.

National Accounts

High Priority

- Update the 1994 base year of the national accounts to obtain an accurate and comprehensive portrait of the current economic situation.

- Develop a plan for implementing the *2008 SNA* as soon as possible, with a clear timetable and activities, detailing the tasks to meet new requirements, such as updating classifications and sectorization.
- Develop and implement a program for conducting periodic economic surveys covering manufacture, services, and other relevant activities.
- Maintain a regularly updated business register.

Other key recommendations

- Use available data on prices and values of main inputs and outputs to apply the double deflation/inflation method on an annual basis.
- Expand the coverage of the sample used for collecting tax data from the MOF to improve source data for the national accounts.
- Improve the timeliness of the quarterly national accounts and of the monthly index of economic activity to take full advantage of their potential as inputs for policy-making decisions.
- Compile supply and use tables in order to improve the consistency of national accounts estimates, with particular attention on estimates of non-observed activities, household final consumption expenditure, and changes in inventories.
- Assess the use of chain-linked indices for improving volume measures of the national accounts.

Consumer Price Index

High Priority

- Conduct a new Household Budget Survey to update CPI weights.

Other key recommendation

- Conduct a study in order to investigate whether the inclusion of prices collected in areas not currently covered by the CPI will impact significantly on official inflation rates.

Producer Price Index

High Priority

- Remove imports from PPI scope, in line with new international methodological standards.

Other key recommendations

- Expand gradually the scope of the PPI to include, at first, exports and electricity and water supply and, at a second stage, construction and services;
- Seek expert advice and promote staff training on PPI methodology.

Government Finance Statistics**High Priority**

- Assign immediately the responsibility for compiling and disseminating GFS to a specific unit of the MOF.
- Assign by Law to the MOF the responsibility for compiling and disseminating GFS, including the obligation of public units to provide the necessary information and penalties for non-reporting.
- Adopt the methodology of the *GFSM 2001* and *PSDSG* to compile and disseminate GFS, and to that effect prepare a detailed migration plan and timetable.
- Define for statistical purposes the institutional structure of the general government sector and public sector in accordance with international standards.

Other key recommendations

- Compile GFS for the general government sector on a regular basis and disseminate on MOF website.
- Disseminate the GFS currently compiled for levels of government broader than budgetary central government.
- Disseminate detailed metadata for GFS on the MOF website. Update GDDS metadata.
- Assign adequate human resources to compiling and disseminating GFS to the extent possible.

Monetary Statistics**High Priority**

- Expand the coverage of the ODC survey with the inclusion of the largest credit unions, which account for 15 percent of the deposits of the system.
- Sign a formal agreement with the National Institute of Cooperatives (INCOOP) to establish regular submission of credit union data from the INCOOP to the CBP and to address other data sharing issues.

- Disseminate the DC and the ODC surveys compiled by the CBP.

Other key recommendations

- Compile and disseminate the OFC survey covering data of insurance corporations and other relevant financial intermediaries.
- Improve the procedures for data cross-checking with GFS and BOP statistics.
- Break up the accounts of other nonfinancial corporations from those of households and NPISHs. To this end, the chart of accounts of commercial banks and finance companies would need to be modified to reflect the necessary changes.

Balance of Payments Statistics

High priority

- Develop a comprehensive plan to migrate the BOP and IIP statistics to *BPM6*, identifying actions and key target dates.
- Supplement direct investment survey data with the information collected from the balance sheets and income statements to cover nonresponse. Prepare and maintain a register of direct investment enterprises in Paraguay.
- Improve the adjustments in the estimation of data on foreign trade, revising the process to estimate goods leaving commercial free zones (“re-exports”) based on data provided by the Directorate General of Customs.

Other key recommendations

- Conduct regular meetings (at least twice a year) with the MOF, to discuss issues of common interest, coordinate the submission of quarterly external debt data to the World Bank (QEDS), and ensure the consistency of fiscal and external sector statistics.
- Disseminate BOP and IIP statistics with sectoral breakdown, in accordance with international standards.
- Obtain information of the currency of denomination of financial assets and liabilities in order to improve treatment of exchange rate changes when BOP transactions are estimated from positions data.

Appendix I. Practices Compared to the GDDS Coverage, Periodicity, and Timeliness of Data

GDDS Data Category	Coverage (meets GDDS)	Periodicity		Timeliness	
		GDDS	Paraguay	GDDS	Paraguay
Real Sector					
National accounts aggregates: GDP (nominal and real) <i>Gross national income, capital formation, savings</i>	Yes Yes	A (Q) A	A, Q A	6–9M 6–9M	A (9M), Q (3M) A (9M)
Production index/indices: Manufacturing or industrial production index/indices, primary commodity, agricultural, or other indices, as relevant	Yes ¹	M (as relevant)	M	6–12W	9W
Price indices: Consumer price index <i>Producer price index</i>	Yes ² Yes ³	M M	M M	1–2M 1–2M	1 W 5 W
Labor market indicators: Employment Unemployment Wages/earnings (all sectors) <i>Labor market indicators disaggregated as appropriate</i>	Yes Yes Yes Yes	A A A A	A, Q A, Q A, Q A, Q	6–9M 6–9M 6–9M 6–9M	A (9M), Q (3M) A (9M), Q (3M) A (9M), Q (3M) A (9M), Q (3M)
Fiscal Sector					
Central government aggregates: Central government budgetary aggregates: revenue, expenditure, balance, and financing with relevant breakdowns <i>Interest payments, indicated separately as a component of expenditure</i>	Yes Yes	Q (M) Q (M)	M M	1Q (1M) 1Q (1M)	1M (75D in December) 1M (75D in December)
Central government debt: Central government debt: domestic and foreign debt, as relevant, with appropriate breakdowns <i>Government-guaranteed debt</i>	Yes Yes	Q Q	M M	1–2Q 1–2Q	1M 1M
Financial Sector					
Depository corporations survey⁴: Broad money Domestic claims (net) Net foreign assets <i>Narrow monetary aggregates (M1/M2)</i>	Yes No No Yes	M M M M	M M M M	1–3M 1–3M 1–3M 1–3M	25D 25D 25D 25D
Central bank survey: Monetary base	Yes	M	M	1–2M	10D
Interest rates: Short- and long-term government security rates, policy-oriented rates <i>Money market or interbank rates and a range of deposit and lending rates</i>	Yes ⁵ Yes	M M	D M	⁶ ⁶	2D 1M
Stock market: <i>Share price index, as relevant</i>	(...)	M		M	

¹ Monthly economic activity index (IMAE).

² Geographical coverage restricted to the Greater Asunción Area.

³ Coverage of the economy is not complete (e.g., electricity production is not covered).

⁴ The CBP compiles but does not disseminate a DC survey.

⁵ Government security rates are not disseminated.

⁶ Dissemination as part of a high-frequency (e.g., monthly) publication.

GDDS Data Category	Coverage (meets GDDS)	Periodicity		Timeliness	
		GDDS	Paraguay	GDDS	Paraguay
External Sector					
Balance of payments aggregates: Goods, services, income, current transfers, capital account, direct investment, portfolio investment, other investment, reserves, net errors and omissions. <i>Disaggregation according to the standard components of the IMF Balance of Payments Manual (sixth edition)</i> <i>Under financial account, report data on financial derivatives assets; assets and liabilities</i>	Yes	A (Q)	Q	6M	3M
	No	A (Q)		6M	
	(...)	A (Q)		6M	
Public and publicly guaranteed external debt outstanding, broken down by maturity	Yes	Q	Q	3–6M	3M
<i>Public and publicly guaranteed external debt by instrument breakdown</i>	Yes	Q	Q	3–6M	3M
Public and publicly guaranteed external debt-service schedule	No	Semiannual		1–2Q	
<i>Public and publicly guaranteed external debt-service schedule, disaggregated by principal and interest</i>	No	Semiannual		1–2Q	
Private external debt outstanding not publicly guaranteed	Yes	A	Q	6–9M	3M
<i>Private external debt service schedule not publicly guaranteed</i>	No	A		6–9M	
Official reserves assets: Gross official reserves assets <i>Reserve-related liabilities</i> <i>Template on international reserves and foreign currency liquidity</i>	Yes	M	W	1–4W	1W
	No	M		1–4W	
	No	M		1–3M (1M)	
Merchandise trade: Total exports and total imports <i>Major commodity breakdowns with longer time lapse</i>	Yes	M	M	8–12W	4W
	Yes	M	M	8–12W	4W
International Investment Position: Assets and liabilities disaggregated by: functional category <i>Assets and liabilities disaggregated according to BPM6 standard component</i> <i>Under financial account, separate data on financial derivatives; assets and liabilities</i>	Yes	A	Q	6–9M	3M
	No	A		6–9M	
	(...)	A		6–9M	
Exchange rates: Spot rates	Yes	D	D	⁶	1WD



PARAGUAY

REPORT ON THE OBSERVANCE OF STANDARDS AND CODES (ROSC)—DATA MODULE VOLUME II

August 2014

RESPONSE BY THE AUTHORITIES

This document contains the authorities' response to the IMF's data quality assessment (Volumes I and III).

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GLOSSARY

<i>2008 SNA</i>	<i>System of National Accounts 2008</i>
BOP	Balance of Payments
<i>BPM6</i>	Sixth edition of the <i>Balance of Payments and International Investment Position Manual</i>
CBP	Central Bank of Paraguay
CPI	Consumer Price Index
DGEEC	General Directorate of Statistics, Surveys, and Census
DIRGE	General Directory of Businesses
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
GDDS	General Data Dissemination System
GFS	Government Finance Statistics
HBS	Household Budget Surveys
IIP	International Investment Position
IMAE	Monthly Index of Economic Activity
IMF	International Monetary Fund
INCOOP	National Institute of Cooperatives
MOF	Ministry of Finance
NPISH	Nonprofit Institutions Serving Households
ODC	Other Depository Corporations
OFC	Other Financial Corporations
PPI	Producer Price Index
ROSC	Report on the Observance of Standards and Codes
RUC	Single Taxpayer Registration Number
SDDS	Special Data Dissemination Standard

INTRODUCTION

The Central Bank of Paraguay (CBP) and the Ministry of Finance (MOF) appreciate the opportunity to provide comments on the ROSC data module. We collaborated closely with the data module ROSC mission and agree with the thrust of the mission's recommendations. Indeed, some of the mission's recommendations were addressed during the mission and few others are being implemented. This document presents our comments on the six datasets assessed during the mission.

CROSS-CUTTING RECOMMENDATIONS

A. High Priority

1. **Give higher priority to statistical functions and promote the adoption of a modern Statistics Law that clearly assigns responsibilities among data-producing agencies.** The CBP will brief the Economic Team on the necessity and importance of the prioritization of statistical functions and the adoption of a modern law guaranteeing and promoting the coordination of inter-institutional tasks among government agencies with legally established statistical functions.
2. **Provide adequate staff resources and other resources to assure the timely and sustainable compilation and dissemination of statistics in accordance with current international standards.** The recruitment and training of new human resources will be promoted, as well as the procurement of advanced technological equipment, based on the available budget resources.
3. **Improve and institutionalize data sharing and overall coordination between the different agencies collecting source data needed for macroeconomic statistics.** Cooperation agreements will be entered into between the CBP, MOF, the National Institute of Cooperatives (INCOOP), and the General Directorate of Statistics, Surveys, and Census (DGEEC) on the sharing of statistical data necessary for the compilation of macroeconomic statistics.
4. **Establish regular mechanisms for enhancing intersectoral data consistency.** An intersectoral data consistency committee will be organized, reflecting the new structure of the CBP.

B. Other key recommendations

5. **Update and maintain current the metadata available in national publications as well as the GDDS metadata posted on the IMF's Dissemination Standards Bulletin Board (DSBB).** The CBP updated the General Data Dissemination System (GDDS) metadata shortly after the ROSC mission. The metadata will also be posted on the CBP website in both Spanish and English.

6. Develop a medium-term plan to subscribe to the Special Data Dissemination Standard (SDDS) by 2017. In light of the recommendations of the ROSC mission on the pending required actions in Paraguayan statistics, progress in the following areas has been made:

(a) In the real sector

Improve the timeliness of monthly PPI statistics. The CBP has shortened the release date of the Producer Price Index (PPI), as can be seen in the Release Calendar on its website.

Improve the timeliness of monthly production indexes. The CBP recently shortened the release time for the monthly index of economic activity (IMAE) and noted this fact in the release calendar on its website. However, improving such timeliness will depend mainly on the provision of the basic statistics supplied by other institutions. The CBP therefore plans to sign inter-institutional agreements clearly stipulating the time and method of submission of basic statistics for the preparation of the national accounts and economic indicators.

(b) In the financial sector

Publish the monthly survey of depository corporations. Since May 2014, the monetary survey has been published in the Statistical Annex of the Monthly Economic Report, which covers the banking system. Once an agreement is signed with INCOOP to ensure the regular and timely submission of data, the monetary survey will be augmented with the data on "Type A" cooperatives, that is, the largest ones.

(c) In the external sector

Monthly dissemination of the international reserves and foreign currency liquidity template with a one-month lag. The international reserves and foreign currency liquidity template has been completed and is in process of internal approval by the authorities. A draft template will be sent to the IMF statistics Department in the near future.

7. Further enhance data and metadata accessibility of all datasets, including adequate formats for data dissemination and sector-specific contact information on the CBP and MOF websites. To facilitate data accessibility, the CBP has been working on the preparation of an interactive online database where users could select time series and frequency. Metadata will be posted on the CBP website in both Spanish and English. The inclusion of sector-specific contact points is being assessed.

8. Strengthen data revision policies and practices and make them known to the public. Data revision policies and practices employed in the compilation of statistical data will be published on the CBP website. This information will be updated as necessary.

RESPONSE BY THE CENTRAL BANK OF PARAGUAY

A. National Accounts

High Priority

- 9. Update the 1994 base year of the national accounts to obtain an accurate and comprehensive portrait of the current economic situation.** Since end-2013, the CBP has been moving forward with a program to update the base year of the System of National Accounts, focused essentially on the supply and use tables and on expanding the system, which will involve the preparation of the integrated economic accounts. Both endeavors will be guided by the recommendations of the *2008 System of National Accounts (2008 SNA)*. The program for updating and expanding the system also includes increasing the human resources involved in the process, with the aim of ensuring the continuity over time of the technical tasks related to the program. To this end, the CBP recently hired new employees to strengthen the technical capabilities of the National Accounts Division.
- 10. Develop a plan for implementing the 2008 SNA as soon as possible, with a clear timetable and activities, detailing the tasks to meet new requirements, such as updating classifications and sectorization.** Implementation of the *2008 SNA* is a key component of the program to update the base year of the national accounts. A timetable was developed for the program, detailing the activities to be carried out in the next 2 ½ years. Of particular note is the progress made with regard to the new system's classifications, both for economic activities and products, as well as for institutional sectors. Technical assistance from the IMF will be required for the implementation of the *2008 SNA*.
- 11. Develop and implement a program for conducting periodic economic surveys covering manufacture, services, and other relevant activities.** As part of the program to update the base year of the national accounts, economic surveys will be carried out covering relevant activities with a high concentration of production. Furthermore, this recommendation will be assessed in a context in which the contribution of the DGEEC to the production of economic statistics will be taken into account.
- 12. Maintain a regularly updated business register.** The CBP has a General Directory of Businesses (DIRGE) prepared by the DGEEC in conjunction with the 2011 National Economic Census, which is to be updated regularly by the DGEEC. In addition to this new business directory, the CBP has a register of businesses provided by the MOF, with data (sales reports and balance sheets) wherein businesses are identified by their respective Single Taxpayer Registration Number (RUC). In that connection, and as part of the program to update the base year, the DIRGE will be used to classify the businesses provided by the MOF, correlating them by RUC. The DIRGE will provide the universe of businesses operating in each economic sector, which will in turn permit monitoring them in the years following the base year update.

Other key recommendations

13. Use available data on prices and values of main inputs and outputs to apply the double deflation/inflation method on annual basis. This methodological recommendation will be implemented as part of the program to update the base year of the national accounts.

14. Expand the coverage of the sample used for collecting tax data from the MOF to improve source data for the national accounts. The CBP is currently working on an update and expansion of the register of businesses received from the MOF, which is based on 2012 and 2013 data. As mentioned, this information will be combined with the data from the DGEEC's DIRGE.

15. Improve the timeliness of the quarterly national accounts and of the monthly index of economic activity to take full advantage of their potential as inputs for policy-making decisions. The CBP recently shortened the release time for the monthly index of economic activity and noted this fact in the release calendar on its website. However, improving the timeliness of the said indicators will depend chiefly on the provision of the basic statistics supplied by other institutions. The CBP therefore plans to sign inter-institutional agreements clearly stipulating the time and method of submission of the basic data for the preparation of the national accounts and economic indicators.

16. Compile supply and use tables in order to improve the consistency of national accounts estimates, with particular attention on estimates of non-observed activities, household final consumption expenditure, and changes in inventories. These methodological recommendations will be implemented as part of the program to update the base year of the national accounts. The supply and use tables will be made available on an annual basis, with particular attention given to estimates of the other components suggested by the ROSC mission.

17. Assess the use of chain-linked indices for improving volume measures of the national accounts. This methodological recommendation will be implemented as part of the program to update the base year of the national accounts.

B. Consumer Price Index

High Priority

18. Conduct a new Household Budget Survey to update CPI weights. The CBP will plan the next Household Budget Survey (HBS) jointly with the DGEEC, in order to update the Consumer Price Index (CPI) weights. Consideration will be given to expanding the coverage of the current CPI to include the country's largest cities as well as introducing other methodological improvements based on the suggestions of the ROSC mission.

Other key recommendation

19. Conduct a study in order to investigate whether the inclusion of prices collected in areas not currently covered by the CPI will impact significantly on official inflation rates. This recommendation will be considered in the CPI update program. In addition, consideration should be given to the possibility of conducting some other type of study on the items in the consumer basket, with a view to comparing price growth in the current coverage area and in the country's largest cities.

C. Producer Price Index

High Priority

20. Remove imports from PPI scope in line with new international methodological standards. Based on this methodological recommendation, imported products will be removed in order to adapt the indicator to the concepts and recommendations contained in the 2004 PPI manual. The PPI of domestic products (concept closer to the new definition) will be renamed as the PPI, and the general index of the previous version will be renamed as a wholesale price index. In keeping with best practices, users will be informed of the proposed changes before they are made.

Other key recommendations

21. Expand gradually the scope of the PPI to include, at first, exports and electricity and water supply and, at a second stage, construction and services. This methodological recommendation will be considered in the PPI update program.

22. Seek expert advice and promote staff training on PPI methodology. The CBP has requested technical advice to the International Monetary Fund (IMF) for a comprehensive revision of the PPI, chiefly for the purpose of aligning it to the international standards. We believe that an improved PPI will also contribute to improvement of the estimates of the national accounts in Paraguay.

D. Monetary Statistics

High Priority

23. Expand the coverage of the other depository corporations (ODC) survey with the inclusion of the largest credit unions, which account for 15 percent of the deposits of the system. In order to attain this objective, the CBP intends to sign an agreement with INCOOP to obtain and include the data on "Type A" cooperatives (i.e., the largest ones) in the monetary survey.

24. Sign a formal agreement with the National Institute of Cooperatives (INCOOP) to establish regular submission of credit union data from the INCOOP to the CBP and to address

other data sharing issues. The CBP intends to sign an agreement with INCOOP to ensure the regular and timely submission of data.

25. Disseminate the depository corporations and the ODC surveys compiled by the CBP.

Starting May 2014, the monetary survey will be published in the Statistical Annex of the CBP's Monthly Economic Report, which will cover the banking system and other financial institutions. Once an agreement is signed with INCOOP to ensure the regular and timely submission of data, the monetary survey will be augmented with the data on "Type A" cooperatives.

Other key recommendations

26. Compile and disseminate the other financial corporations (OFC) survey covering data of insurance corporations and other relevant financial intermediaries.

The necessary steps will be taken to compile the consolidated accounts of insurance corporations for inclusion in the OFC survey. This will require allocating human resources that will be in charge of working with the data obtained from the Superintendency of Insurance.

27. Improve the procedures for data cross-checking with GFS and BOP statistics. The financial system data compiled for the monetary statistics will be periodically reconciled with the balance of payments (BOP) and international investment position (IIP) data for the resident banking system, as well as with the MOF's government finance statistics (GFS).

28. Break up the accounts of other nonfinancial corporations from those of households and NPISH. To this end, the chart of accounts of commercial banks and finance companies would need to be modified to reflect. Separating the accounts of other nonfinancial corporations into households and nonprofit institutions serving households (NPISH) involves changing the financial institutions' plan of accounts. This recommendation will therefore be taken into account when the Superintendency of Banks decides to make a change in the plan of accounts for financial institutions.

E. Balance of Payments Statistics

High priority

29. Develop a comprehensive plan to migrate the balance of payments and IIP statistics to BPM6, identifying actions and key target dates. Working procedures are being developed to complete the implementation of the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)* in 2014. Technical assistance from the IMF has been requested to ensure attainment of the objective. The CBP intends to finalize the current account in July, while the financial account will be completed in November of this year. The *BPM6* version of the balance of payments and IIP is intended for publication in the 2014 Preliminary Economic Report of the CBP.

The CBP will publish a technical note explaining the *BPM6* migration process to inform the general public.

30. Supplement direct investment survey data with the information collected from the balance sheets and income statements to cover no response. Prepare and maintain a register of direct investment enterprises in Paraguay. Joint efforts have been undertaken with the Tax Authority on the use of data submitted for tax purposes by businesses, and it is expected that an inter-institutional agreement will be signed to that effect. Continuous processes of monitoring and improving the collection of foreign investment data are under way, subject to the general recommendations on available technical personnel and the legal framework for statistical compilation.

31. Improve the adjustments in the estimation of data on foreign trade, revising the process to estimate goods leaving commercial free zones (“re-exports”) based on data provided by the Directorate General of Customs. Joint efforts are under way with the National Customs Directorate to use administrative records of import data subject to the tourism regime, which provide more favorable conditions for the resale of imported goods abroad. It is expected that the current estimation system based on potential consumption will be replaced by administrative records in 2014, in conjunction with the implementation of *BPM6*. The use of the new data series is subject to inter-sectoral coordination with the other statistics-producing agencies of the CBP.

Other key recommendations

32. Conduct regular meetings (at least twice a year) with the MOF, to discuss issues of common interest, coordinate the submission of external debt data to the World Bank (QEDS), and ensure the consistency of fiscal and external sector statistics. Regular meetings have been initiated with officials of the Directorate of Public Credit and the Debt Directorate of the MOF for the purpose of assigning dissemination functions. The MOF is responsible for publishing data on the external debt of the National Treasury, based on UNCTAD’s Debt Management and Financial System (SIGADE), which is currently sent to the World Bank databases. The CBP is responsible for compiling and disseminating total external debt using the data provided by the Directorate of Public Credit regarding the National Treasury, as well as other sources, to compile total external debt. The CBP and the MOF will take the necessary steps to assure consistency of fiscal and external sector statistics, including external debt and IIP data.

33. Disseminate balance of payments and IIP statistics with sectoral breakdown, in accordance with international standards. Publication of the institutional breakdown of data is part of the migration from *BPM5* to *BPM6* planned for this year.

34. Obtain information of the currency of denomination of financial assets and liabilities in order to improve treatment of exchange rate changes when balance of payments transactions are estimated from positions data.

The improvements in the prioritization of statistical functions, the reform of the legal framework, and the allocation of human and financial resources will allow increasing the detail and the quality of the data.

RESPONSE BY THE MINISTRY OF FINANCE

A. Government Finance Statistics

The Ministry of Finance expresses its appreciation to the ROSC mission from the IMF's Statistics Department for its assessment of the country's fiscal statistics and the recommendations made for their improvement. The MOF is fully aware of the challenges that it faces in this area, and of the vital importance of government finance statistics in the design, monitoring, and evaluation of the government's fiscal policy.

In this context, we endorse the mission's recommendation to implement the *Government Finance Statistics Manual 2001* methodology, and express our need for IMF assistance to evaluate the resources currently available, as well as the requirements of the new methodology in terms of basis of recording, coverage, valuation, integration of flows and stocks, and the collection of data on nonfinancial assets.

ACTION PLAN

Based on the data ROSC's recommendations, and in collaboration with the mission, we have designed an action plan to further increase the analytical usefulness of Paraguay's macroeconomic statistics. The detailed action plan presented below includes cross-cutting actions as well as measures specific to each data set compiled by the CBP. It should be noted that not all actions included in this plan have the same importance or priority, and that at times they are conditional upon the allocation of resources, funding, training, and/or technical assistance.

A. Cross-cutting Actions		
DQAF Code	Planned Actions	Timing
High Priority		
0.1.1	<ul style="list-style-type: none"> Actively promote the adoption of a modern Statistics Law that clearly identifies responsibilities among data-producing agencies. 	Medium term
0.2.1	<ul style="list-style-type: none"> Give higher priority to statistical functions and provide adequate staffing and other resources to assure timely and sustainable production of quality macroeconomic data. 	Medium term
0.1.2	<ul style="list-style-type: none"> Establish data sharing agreements among different agencies collecting data needed for macroeconomic statistics. 	Short term
4.2.3	<ul style="list-style-type: none"> Conduct periodic meetings between data-producing agencies for improving inter-sectoral data consistency. 	Short term
Other Actions		
2.2.1	<ul style="list-style-type: none"> Gradual adoption of the new methodological standards for national accounts, government finance statistics, and external sector statistics. 	Medium term
4.1.1 4.1.2	<ul style="list-style-type: none"> Full compliance with the General Data Dissemination System (GDDS). 	Short term
4.1.1 4.1.2	<ul style="list-style-type: none"> Develop a medium-term plan to subscribe to the Special Data Dissemination Standard (SDDS). 	Medium term
4.3.1	<ul style="list-style-type: none"> Better communicate data revision and data dissemination practices to the public. 	Short term
5.2.1	<ul style="list-style-type: none"> Keep current the GDDS metadata posted on the IMF website and improve the metadata available in our national publications. 	Medium term
5.1.2	<ul style="list-style-type: none"> Enhance data accessibility by producing a user-friendly mechanism to provide electronic access to selected databases. 	Short term

B. National Accounts Statistics		
DQAF Code	Planned Actions	Timing
Prerequisite of Quality		
0.1.2	<ul style="list-style-type: none"> Enhance coordination with other statistical agencies through official agreements to define detailed data requirements. Establish inter-institutional working groups or committees by subject matter to coordinate statistical work. 	Short term Short term
0.2.1	<ul style="list-style-type: none"> Develop and implement a long-term strategy for strengthening human resources in the National Accounts Division in order to expand and sustain the production of national accounts. 	Short term
0.2.2	<ul style="list-style-type: none"> Develop a strategy to promote and retain highly skilled staff and better control turnover within the institution. 	Short term
0.3.1	<ul style="list-style-type: none"> Initiate regular consultations with users, including through fostering users' groups and establishing an advisory committee to improve the usefulness of statistics. 	Medium term
Methodological Soundness		
2.2.1	<ul style="list-style-type: none"> Develop a plan to implement the <i>2008 SNA</i> with detailed activities and clear timetable in the context of the ongoing project to change the 1994 base year. Enhance the compilation of the sequence of accounts including the rest of the world accounts according to the <i>2008 SNA</i>. Formulate a project to compile institutional sector accounts. Resume the compilation of supply and use tables. 	Short-term Medium term Medium term Medium term
2.3.1	<ul style="list-style-type: none"> Update current classifications to ISIC Rev. 4 and CPC Ver. 2, and adopt Classification of Individual Consumption According to Purpose (COICOP) and Classification of Functions of Government (COFOG) when changing the base year of the national accounts. 	Medium term
2.4.2	<ul style="list-style-type: none"> Initiate close coordination with the MOF to derive suitable adjustments to convert government expenditure data onto an accrual basis. Evaluate the correct assignation of work-in-progress on a cost basis along the crops' cycle period. 	Short term Short term
Accuracy and Reliability		
3.1.1	<ul style="list-style-type: none"> Develop a long-term project to conduct a program of structural surveys to cover/supplement activities/components of the national accounts. Include in these surveys minimum information requirements such as output (including secondary production), revenues, input details and costs, gross fixed capital formation, employment, and inventories by concept. Maintain current the business register regularly by using income and value added tax records and economic census data. 	Short term Short term

	<ul style="list-style-type: none"> • Coordinate with the DGEEC a plan to conduct a new HIES, and establish a schedule to conduct these surveys every five years. • Develop a strategy to exploit available information contained in the balance sheets reported to the international department. • Evaluate the possibility of conducting quarterly surveys on production for manufacturing, sales of services, and inventories of inputs and finished and resale products. 	Short term
		Short term
		Short term
3.1.3	<ul style="list-style-type: none"> • Conduct meetings with the Balance of Payments Division to assess the possibility of improving timeliness of trade data. 	Short term
3.2.1	<ul style="list-style-type: none"> • Design and establish a regular process of assessment of the coverage of samples used to obtain administrative data. 	Short term
3.3.2	<ul style="list-style-type: none"> • Abandon the single indicator approach for the estimation of volume figures in the annual national accounts. • Reinforce the capacity for developing independent estimates of the accounts in current values. • Resume the use of supply and use tables as a compilation tool for the national accounts. • Assess the possibility of compiling directly the changes in inventories from available balance sheets. • Derive independent estimates for final household consumption expenditure (exploiting alternative data sources such value added tax records). • Move to chained indices for the compilation of volume measures from the new base year. 	Medium term
		Short term
		Medium term
		Short term
		Medium term
		Medium term
		Medium term
	Serviceability	
4.2.2	<ul style="list-style-type: none"> • Reconstruct and disseminate historical series as far back as possible for the main national accounts aggregates. Make methodologies applied available to the public. 	Medium term
4.3.3	<ul style="list-style-type: none"> • Incorporate the revision analysis within the regular compilation tasks and include a suitable paragraph in published documents. 	Short term
	Accessibility	
5.1.2	<ul style="list-style-type: none"> • Conduct a feasibility study to assess the development of a flexible user-friendly database that optimizes data management on an interactive way. 	Short term
5.2.2	<ul style="list-style-type: none"> • Include detailed methodologies within the available documents on the CBP website as to provide more information regarding detailed compilation procedures to more specialized users. 	Short term
5.3.1	<ul style="list-style-type: none"> • Provide users with a specific contact point for national accounts. 	Short term

C. Consumer Price Statistics		
DQAF Code	Planned Actions	Timing
	Prerequisite of Quality	
0.2.1	<ul style="list-style-type: none"> Hire additional price collectors and provide training to reinforce the capabilities of the staff to carry out additional planned tasks, including the update of the CPI basket and its weights. Move from paper to electronic (tablet PCs) price collection. 	Short term Short term
	Methodological Soundness	
2.2.1	<ul style="list-style-type: none"> Carry out a study to assess whether the 2001 finding supporting the idea that the Greater Asuncion Area and National CPIs had similar price behavior remains valid by using prices collected in cities not covered by the present index (e.g., Ciudad del Este). Produce a new CPI aggregate with a broader share of consumption expenditure by including the owner-occupied housing component using the rental equivalence approach. 	Medium term Medium term
	Accuracy and Reliability	
3.1.1	<ul style="list-style-type: none"> Coordinate the next HBS with the DGEEC. Define, jointly with the DGEEC, a calendar to conduct a HBS every five years. Update the CPI basket and weights using information derived from the next HBS. Conduct a new HBS at least every 5 years. 	Short term Medium term Medium term
3.2.1	<ul style="list-style-type: none"> Conduct a study to help optimizing the sample sizes of the next CPI. 	Medium term
3.5.1	<ul style="list-style-type: none"> Conduct a revision study to evaluate the size of the substitution bias associated to the current CPI in the next revision exercise, which will combine the new weights in the compilation of past figures. 	Medium term
	Serviceability	
4.3.1	<ul style="list-style-type: none"> Establish a calendar for updating the basket and weights of the CPI every five years, in line with best international practices. 	Medium term
	Accessibility	
5.2.1	<ul style="list-style-type: none"> Update the GDDS metadata when CPI weights are refreshed and/or there are significant methodological changes. 	Medium term
5.3.1	<ul style="list-style-type: none"> Include a contact point, specific to the CPI, in the <i>Informe de Inflación</i> and in other dissemination formats with CPI figures (e.g., in data files available on the CBP website). 	Short term
5.3.2	<ul style="list-style-type: none"> Enhance the presentation of CPI data on the CBP website. 	Medium term

D. Producer Price Statistics		
DQAF Code	Planned Actions	Timing
	Prerequisite of Quality	
0.2.1	<ul style="list-style-type: none"> Hire additional price collectors and ensure the formation of price collection teams specialized in the PPI. Training and external technical assistance on PPI methodology. Move from paper to electronic (tablet PC's) price collection. 	Short term Short term Short term
	Methodological Soundness	
2.1.1	<ul style="list-style-type: none"> Separate imports from the conceptual framework of the PPI, as they do not represent domestic production and are out of the scope of this indicator. 	Short term
2.2.1	<ul style="list-style-type: none"> Expand the scope of the PPI in order to include, at a first stage, electricity and water supply and exports and, at a later stage, construction and services. Develop a system of producer and wholesale price indexes to be fully implemented in the next PPI revision, which will serve as the basis for the future expansion of the scope of the PPI. 	Medium term Medium Term
	Accuracy and Reliability	
3.1.1	<ul style="list-style-type: none"> Secure the revision of the current PPI (2011) and the release of a new PPI for 2016. Regular update of the directory of establishments through the use of the information taken from the 2011 National Economic Census and other administrative sources. 	Short term Short term
3.2.1	<ul style="list-style-type: none"> Conduct a study aiming to help optimizing the sample sizes of the next PPI. 	Medium term
3.5.1	<ul style="list-style-type: none"> Conduct a revision study to evaluate the size of the substitution bias associated to the current PPI in the next revision exercise, which will combine new weights in the compilation of past figures. 	Medium term
	Serviceability	
4.1.2	<ul style="list-style-type: none"> Produce a separate press release for the PPI and anticipate the dissemination of the results of this indicator. 	Short term
4.3.1	<ul style="list-style-type: none"> Establish a calendar for the update of the PPI every five years. 	Medium term
	Accessibility	
5.1.3	<ul style="list-style-type: none"> Include a separate line for the PPI in the current preannounced schedule that is available at the CBP website. 	Short term
5.2.1	<ul style="list-style-type: none"> Update the GDDS metadata whenever PPI weights are refreshed and/or there are changes in PPI methodology. 	Short term
5.3.1	<ul style="list-style-type: none"> Create a specific PPI contact point in dissemination formats that include figures on this statistics. 	Short term
5.3.2	<ul style="list-style-type: none"> Enhance the presentation of PPI data on the CBP website. 	Medium term

E. Monetary Statistics		
DQAF Code	Planned Actions	Timing
	Prerequisite of Quality	
0.1.2	<ul style="list-style-type: none"> Sign an agreement with the National Institute of Cooperatives (INCOOP) establishing regular data sharing with the CBP. 	Short term
0.1.2	<ul style="list-style-type: none"> Implement regular transmission of insurance corporations data from the Superintendence of Insurance to the Monetary Statistics Division. 	Short term
0.2.1	<ul style="list-style-type: none"> Assign additional staff to further improve the compilation of monetary and financial statistics. 	Short term
0.3.1	<ul style="list-style-type: none"> Establish a system of regular consultation on data users' views on the relevance and practical utility of monetary data. 	Medium term
0.4.2	<ul style="list-style-type: none"> Introduce regular procedures for monetary data revisions. 	Short term
	Assurance of Integrity	
1.2.4	<ul style="list-style-type: none"> Preannounce any major changes in the compilation of monetary statistics (e.g., the expansion of the coverage to include deposit-taking cooperatives). 	Short term
	Methodological Soundness	
2.2.1	<ul style="list-style-type: none"> Include the accounts of credit unions in monetary statistics disseminated by the CBP. 	Short term
	<ul style="list-style-type: none"> Obtain quarterly data for the entire cooperative sector to verify monthly estimates. 	Medium term
	<ul style="list-style-type: none"> Assess the possibility of compiling and disseminating the OFC survey covering data of insurance corporations and other relevant financial intermediaries. 	Medium term
	<ul style="list-style-type: none"> Review the current financial soundness indicators (FSIs) and identify additional FSIs. 	Medium term
2.3.1	<ul style="list-style-type: none"> Reclassify the national component of the binational enterprises (Itaipú and Yacyretá) from nonresident to resident nonfinancial public corporations. 	Short term
	<ul style="list-style-type: none"> Split the accounts of "Other resident sectors" into "Other nonfinancial corporations," "Households," and "NPISHs." 	Medium term
	<ul style="list-style-type: none"> Sectorize accrued interest of ODC and report it together with the underlying instruments. 	Medium term
	Accuracy and Reliability	
3.2.1	<ul style="list-style-type: none"> Obtain—in an electronic format—monthly data for individual commercial banks from the Superintendence of Banks (SB). This would allow verification of the quality of the source data of individual institutions. 	Short term
3.4.1	<ul style="list-style-type: none"> Introduce systematic validation procedures for monetary data: (i) ODC's position with the CBP against CBP's records; 	Short term

	(ii) interbank positions at the level of the individual institution; (iii) ODC's reporting of government securities holdings against CBP's debt registry; (iv) banking sector records on credit to government and government deposits against fiscal data; and (v) monetary data on international reserves and foreign assets against external sector data (already performed).	
3.4.3	• Keep systematic records of detected problems in monetary data to help improve the statistical process.	Short term
	Serviceability	
4.1.2	• Include tables with the DC and ODC surveys in CBP publications.	Short term
4.2.3	• Reconcile monetary statistics with fiscal data.	Short term
	Accessibility	
5.1.3	• Publish an advance release calendar for monetary statistics.	Short term
5.3.1	• Provide detailed contact information for users of monetary statistics.	Short term

F. Balance of Payments Statistics

DQAF Code	Planned Actions	Timing
	Prerequisite of Quality	
0.1.4	• Enforce reporting from the nonfinancial private sector.	Short term
0.2.1	• Increase the number of staff dedicated to external sector statistics compilation to assure the smooth migration to <i>BPM6</i> • Update the IT process to access to the databases managed by the Superintendency of Banks and the Superintendency of Insurance, respectively.	Short term Medium term
0.3.1	• Establish procedures to identify the users' relevance and practical utility of existing data.	Medium term
0.4.2	• Undertake regular reviews to identify steps necessary to maintain quality requirements.	Short term
	Assurances of Integrity	
1.2.4	• Inform users in advance of the introduction of <i>BPM6</i> -basis data.	Short term
	Methodological Soundness	
2.1.1	• Develop a comprehensive plan that lists actions and key target dates to migrate BOP and IIP statistics to <i>BPM6</i> . • Remove the financial derivatives line included under direct investment, in BOP and IIP presentations.	Short term Short term
2.2.1	• Develop a plan to compile the BOP and IIP memorandum items included in the standard presentation of <i>BPM6</i> , as relevant.	Medium term
2.3.1	• Disseminate the sectoral breakdown in the financial account of the BOP and in the IIP.	Short term

	<ul style="list-style-type: none"> Implement the classification and sectorization recommended in <i>BPM6</i> as explained in volume III. 	Short term
2.4.1	<ul style="list-style-type: none"> Revise the value of portfolio investment liabilities in the IIP using the market value at the end of each reporting period. Obtain information on the currency of denomination of financial assets and liabilities to exclude exchange rate changes when transactions are estimated from positions. 	Short term Short term
2.4.2	<ul style="list-style-type: none"> Record interest on external debt, including portfolio investment, on an accrual basis. Record arrears in the original debt instrument (when implementing <i>BPM6</i>) rather than under other short-term debt liabilities, which was the treatment in <i>BPM5</i>. 	Medium term Short term
Accuracy and Reliability		
3.1.1	<ul style="list-style-type: none"> Supplement direct investment survey-data with information collected from the balance sheets and income statements of the direct investment enterprises to improve FDI coverage. Prepare and maintain a register of direct investment enterprises in Paraguay with precise information (e.g., net worth and percentage of foreign ownership) to establish a ranking of these enterprises and assure the inclusion of FDI data and other external sector related data, including services, from the largest direct investment enterprises. Obtain detail data on freight transport and freight insurance with nonresidents from the Directorate General of Customs on a regular basis. In coordination with the banking sector, improve the collection of data on payments and receipts in foreign currency by: <ul style="list-style-type: none"> (i) including new BOP concepts; (ii) assuring the appropriate classification of each item (above a threshold); and (iii) adding information on the transactors' residency. <p>Increase banking sector awareness on the need for accurate data for BOP and IIP purposes.</p> <ul style="list-style-type: none"> Use information posted on the US Federal Reserve website only to verify information from other data sources, because this information, at least partially, is included in the BIS data. Consider the differences in methodology when using data from the Direction of Trade Statistics (DOTS) to estimate BOP transactions. 	Short term Short term Short term Medium term Short term Short term Short term
3.3.1	<ul style="list-style-type: none"> Explore the use of sample techniques to derive grossing-up factors. 	Medium term
3.3.2	<ul style="list-style-type: none"> Revise the estimates of goods leaving the Commercial Free Zones ("re-exports") using imports data under the Decree 6406 collected by the Directorate General of Customs. 	Short term
	<ul style="list-style-type: none"> Review current estimates on imports of smuggled goods and informal trade with compilers from counterpart economies. 	Medium term

	<ul style="list-style-type: none"> • Enact an agreement with National Directorate of Civil Airports to obtain transports data for BOP purposes. • In coordination with the Ministry of Foreign Affairs, conduct a survey to foreign embassies and consulates to obtain data on government services n.i.e (credits). • Apply the residence criteria to include real estate estimates in external sector statistics. 	Medium term Medium term Short term
3.5.1	<ul style="list-style-type: none"> • Strengthen data revision policies and practices. 	Short term
	Serviceability	
4.1.2	<ul style="list-style-type: none"> • Report quarterly BOP and IIP statistics to the IMF's Statistics Department with quarterly timeliness. 	Short term
4.2.2	<ul style="list-style-type: none"> • Establish a regular process to cross-check the consistency between each component of the income account and the corresponding position recorded in the IIP. 	Short term
4.2.3	<ul style="list-style-type: none"> • Conduct regular meetings within the CBP to ensure consistency of macroeconomic statistics. • Conduct semiannual meetings with the MOF to discuss issues of common interest, coordinate external debt data submission to the World Bank (QEDS), and ensure the consistency with fiscal data. 	Short term Short term
	Accessibility	
5.2.1	<ul style="list-style-type: none"> • Prepare comprehensive metadata, describing concepts, data sources, compilation methods, and other methodological aspects. • Maintain current the metadata available in national publications as well as the GDDS metadata posted on the IMF's DSBB. • Complete the IMF's BOP and IIP metadata questionnaires through Integrated Correspondence System (ICS). 	Short term Ongoing Short term



PARAGUAY

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REPORT ON THE OBSERVANCE OF STANDARDS AND
CODES (ROSC)—DATA MODULE VOLUME III

**DETAILED ASSESSMENTS USING THE DATA QUALITY ASSESSMENT
FRAMEWORK (DQAF)**

Approved By
**Louis Marc Ducharme and
Alejandro Werner**

Prepared By
The Statistics Department

This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Paraguay's Report on the Observance of Standards and Codes (ROSC)—Data Module. It also includes as appendices the 2012 DQAF generic framework; Paraguay's practices compared to the SDDS coverage, periodicity, and timeliness of data; and the results of the users' survey.

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Glossary

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
<i>2008 SNA</i>	<i>System of National Accounts 2008</i>
<i>2013 EDSG</i>	<i>External Debt Statistics: Guide for Complifiers and Users, 2013</i>
ANDE	National Electricity Administration
BIS	Bank for International Settlements
BOP	Balance of Payments
<i>BPM5</i>	Fifth edition of the <i>Balance of Payments Manual</i>
<i>BPM6</i>	Sixth edition of the <i>Balance of Payments and International Investment Position Manual</i>
CBP	Central Bank of Paraguay
CEMLA	Latin American Center for Monetary Studies
CFZ	Commercial Free Zones
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPC	Central Product Classification
CPI	Consumer Price Index
DBP	Balance of Payments Division, CBP
DC	Depository Corporations
DCN	National Accounts Division, CBP
DCNMI	National Accounts and Domestic Market Department, CBP
DEI	International Economics Department, CBP
DEM	Monetary Studies Division, CBP
DEMF	Monetary and Financial Studies Department, CBP
DGA	Directorate General of Customs, MOF
DGCP	General Directorate of Public Accounting, MOF
DGCDP	General Directorate of Credit and Public Debt, MOF
DGEEC	Directorate General of Statistics, Surveys, and Censuses
DINAC	National Directorate of Civil Airports
DMI	Domestic Market Division, CBP
<i>DOTS</i>	<i>Direction of Trade Statistics</i>
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
FDI	Foreign Direct Investment
FISIM	Financial Intermediation Services Indirectly Measured
GCF	Office of the Manager for Accounts and Finance, CBP
GDDS	General Data Dissemination System
GDP	Gross Domestic Product
GFS	Government Finance Statistics
<i>GFSM 1986</i>	<i>A Manual of Government Finance Statistics, 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>

Glossary (Concluded)

HBS	Household Budget Survey
IIP	International Investment Position
<i>IFS</i>	<i>International Financial Statistics</i>
IMAE	Monthly Index of Economic Activity
IMF	International Monetary Fund
INCOOP	National Institute of Cooperatives
ISIC	International Standard Industrial Classification of All Economic Activities
MERCOSUR	Southern Common Market
MFS	Monetary and Financial Statistics
<i>MFSCG</i>	<i>Monetary and Financial Statistics Compilation Guide, 2008</i>
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual, 2001</i>
MOF	Ministry of Finance
NPISH	Nonprofit Institutions Serving Households
ODC	Other Depository Corporations
OFC	Other Financial Corporations
PPI	Producer Price Index
<i>PSDSG 2011</i>	<i>Public Sector Debt Statistics: Guide for Compilers and Users 2011</i>
QEDS	World Bank's Quarterly External Debt Statistics
ROSC	Report on the Observance of Standards and Codes
SB	Superintendency of Banks, CBP
SDDS	Special Data Dissemination Standard
SDRs	Special Drawing Rights
SGGPM	Office of the General Deputy Manager for Monetary Policy, CBP
SICO	Accounting Database
SIAF	Integrated Financial Management System
SIGADE	Debt Management and Financial Analysis System, UNCTAD
SNA	System of National Accounts
SOFIA	Customs Tariff Scheduling System
SS	Superintendence of Insurance, CBP

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

The following detailed information on indicators of statistical practices in the areas of the national accounts, prices, government finance, monetary, and balance of payments statistics was gathered from publicly available documents and information provided by the Paraguayan officials. This information, which is organized along the lines of the generic DQAF (see Appendix III), was used to prepare the summary assessment of data quality elements, based on a four-part scale of observance, shown in Paraguay's Report on the Observance of Standards and Codes (ROSC)—Data Module.

NATIONAL ACCOUNTS STATISTICS

0. Prerequisites of Quality

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.

The national accounts of Paraguay are compiled and disseminated by the National Accounts and Domestic Market Department (DCNMI) of the Office of the Deputy General Manager for Monetary Policy (SGGPM) of the Central Bank of Paraguay (CBP). The CBP, established by Article 285 of the Constitution, in its character of technical body, holds the exclusive duty of monetary emission in accordance to the objectives of economic policy of the national government. According to its Charter, the CBP is a technical body with administrative and patrimonial autarky with normative autonomy within the boundaries of the Constitution (Article 1).

The Charter of the CBP (Law No. 489/95) stipulates in its Article 4 that within its main functions, the CBP will act as economic and financial counselor of the government but does not explicitly stipulate the compilation and dissemination of national accounts statistics as one of the functions of the CBP. Nonetheless, in achieving the above mentioned function, Article 82 on compilation of statistics states that the CBP will compile and publish among others, statistics on product and income.

The authority for collecting statistics is provided by Article 80 of the CBP's Charter, which states that: public institutions, banks, financial, and other institutions engaged in financial intermediation and business or private sector will provide the requested data and information the CBP requires for the performance of its functions, preserving the confidentiality of such information. Article 81 states that for financial planning purposes, the Ministry of Finance (MOF) will provide the CBP reports on income and tax expenses, the implementation of the national budget and other information necessary for the development of such programming. Furthermore, Article 5 states that to fulfill its functions, the CBP will count on own resources and the cooperation of all entities dependent on the state.

Recommendations:

- Within the ongoing project of revision of the CBP's Charter, consider explicitly stating CBP's responsibility for compiling and disseminating national accounts statistics, rather than statistics in the matters of product and income only.
- Considering the restrictions of source data and the efforts made by the CBP in collecting basic statistics, legal empowerment for collecting information could be strengthened in the Charter, specifically for the group of nonfinancial corporations.

0.1.2 Data sharing and coordination among data-producing agencies are adequate.

The CBP keeps regular contact with other data producer agencies in order to coordinate and promote appropriate and common understanding about data requirement and sharing. Coordination has turned into an effective, timely and updated (when appropriate) flow of information. On the occasion of mayor surveys, the CBP participates in technical inter-institutional ad-hoc committees and through other informal means.

In particular, the CBP has established formal agreements and arrangements with other producing institutions to provide effective and timely flows of data for the compilation of the national accounts. The CBP receives from the MOF: (i) monthly data on levels of aggregate sales by economic activity of medium and large size firms; (ii) monthly data for the central government; and (iii) annual data for the general government. The CBP also receives data on crop prices and livestock from the Ministry of Agriculture and on employment from the Ministry of Labor, Employment and Social Security.

At the technical level, inter-institutional formal contacts also facilitate the harmonization of statistics through the application of consistent data definitions, classifications, valuation basis, and others, where common objectives on the produced statistics allow. For example, on the occasion of the forthcoming change of the base year of the national accounts, the most important producers of statistics have decided to apply the International Standard Industrial Classification of all Economic Activities (ISIC) Rev. 4 to facilitate the use of data on production, remuneration of employees, employment, collected taxes, and other statistics classified by economic activity. In the same vein, the harmonization at the level of products will be obtained by updating the product classification to the Central Product Classification (CPC) version 2.

The Directorate General of Statistics, Surveys, and Censuses (DGEEC) has the task of organizing, planning, developing, and implementing statistical national policies and plans, as well as surveys and censuses of the Republic of Paraguay according to national laws and international conventions. Additionally, the DGEEC must coordinate the execution of plans, action programs, and administration in matters related to statistics, surveys, and censuses with other public and private bodies. Despite having such responsibilities, the DGEEC lacks the institutional hierarchy, and the appropriate legal strength and resources to fulfill the duties authorized by the 1942 law and subsequent amendments.

The involvement of the DGEEC in producing economic statistics is limited and its confidentiality restrictions are an impediment to a fluent sharing of detailed data with the CBP.

Recommendations:

- Enhance formal coordination with other statistical agencies through official agreements to define data requirements at detailed level, and to warrant continuity and timeliness of source data transfers. Use the collected data in all their potential as to avoid duplication of efforts and to improve statistical quality.
- Establishment and regular functioning of inter-institutional working groups or committees by subject matter so as to coordinate statistical work.
- Sign an agreement between the CBP and the DGEEC so that the National Accounts Division (DCN) may have full access to the economic census data taking into account confidentiality safeguards.

0.1.3 Individual reporters' data are kept confidential and used for statistical purposes only.

The Charter of the CBP establishes the obligation to maintain the secrecy and confidential nature of information requested by the Bank, including provisions for supplying information on the economic and financial situation of finance companies, with express prior authorization of the entity concerned, to the authorities responsible for supervising entities of this nature in foreign countries (Articles 6, 7, and 8).

Article 6 clearly states that any person who has (had) access to reserved information is in the obligation of keeping secrecy. Failure of fulfillment of these rules is subject to penal liabilities. Article 80 reinforces the commitment of the CBP of keeping confidentiality of the information transferred for the performance of its duties.

Individual data are handled under proper access privileges so access to microdata is restricted only to specific professionals in charge of the compilation. Aggregation rules are in place to prevent individual detection of entities as to complying with regulations described in Article 82 of the Charter.

Also, the General Law on Banks, Finance Companies, and other Credit Institutions specifies: (i) the type of information and periodicity of its submission by financial institutions (Article 55); (ii) provisions related to the submission of information to the public by directors, administrative and supervisory bodies, and workers of financial institutions, including the CBP and the Superintendence of Banks (Article 84); (iii) exceptions to the secrecy requirements, especially in judicial or administrative cases in the process of which information on operations protected by bank secrecy has been used; and (iv) sanctions for failure to comply with the provisions of this law. Furthermore, these provisions are public knowledge and the law does not admit exceptions on grounds of ignorance thereof.

Respondents are informed in surveys and other statistical inquiries of their rights and obligations with regard to the provision of information. Particular emphasis is put on the confidential nature of the information they provide and that it will be used for the purpose of producing statistics.

0.1.4 *Statistical reporting is ensured through legal mandate and/or measures to encourage response.*

As stated under 0.1.1, the CBP's Charter provides the legal authority to collect data required by the Bank. However, no penalties are established for not responding or providing false information, which implies a voluntary response scheme to surveys or direct questionnaires, lowering the rates of response and increasing the need of data imputation. The General Law on Banks, Finance Companies, and other Credit Institutions specifies sanctions for failure to comply with the provisions of this law, but they do not apply to nonfinancial entities, which for national accounts statistics are especially important. As a result, filling-in forms of CBP's surveys by these entities is done, on a voluntary basis.

The CBP seeks to secure cooperation by providing information to the respondents on the objectives of the survey and the use it will give to the data received in a note to which the questionnaire is attached. Assistance provided to respondents in completing and submitting the questionnaires takes the form of a point of contact. Careful consideration is given to the response burden, relying as much as possible on administrative sources (for example, enterprises' financial statements attached to the tax forms).

0.2 Resources

0.2.1 *Staff, facilities, computing resources, and financing are commensurate with statistical programs.*

Under the current functional structure, the DCNMI comprises four divisions: the National Accounts, the Domestic Market (in charge of the CPI and PPI), Technical Support, and Sectoral Estimation and Projection. The CBP is currently in the process of renewing its operational structure, which has been officially approved by the CBP's Board but not implemented in full at the time of the mission. Thus, the description follows the operational structure rather than the new scheme.

The DCN has 20 employees, of which 17 have university degree. Staff can be grouped into four different clusters: (i) current compilers of the national accounts (five employees, including the division chief); (ii) new hiring intended for supporting the change of the base year (eight employees); (iii) supporting staff (three employees); and (iv) staff studying abroad (four employees). The average staff seniority of current compilers of the national accounts (group i) is approximately twelve years. There are four sections within the DCN: (i) Statistics on Production of Goods; (ii) Statistics on Services; (iii) Institutional Sector Accounts, and (iv) Short Term Indicators.

As previously mentioned, a plan for changing the base year for the national accounts is under development and additional staff will be hired on top of the eight new employees.¹ Twenty additional employees to be mainly devoted to the rebasing project are expected by mid 2014. Most of the new staff would be recently graduated students (economics and accounting); therefore, with no experience in national accounts compilation.

Overall, the current staff have a good level of professional training, particularly due to the implementation of the *System of National Accounts 1993 (1993 SNA)* and the change of the base year of the national accounts (1994=100) carried out in 2005. Staff participated in various courses and workshops on the *1993 SNA* and its implementation, which were organized while the rebasing work was underway. Subsequently, four staff members have participated in short courses abroad, mostly provided by the Spanish National Statistical Institute (INE-Spain), and one course on quarterly accounts provided by the IMF in Brasilia. Four IMF's national accounts technical assistance missions took place since the 2006 Report on the Observance of Standards and Codes (ROSC) Data Module mission, which assisted in developing new products and supported on-the-job training. Salaries received by employees of the DCN are competitive with respect to other comparable institutions.

To overcome the lack of direct basic statistics (see 3.1.1 below), national accounts compilers must make special efforts to collect and process source data, either through business surveys or based on administrative records. The progressive decrease of available compilers has led to a decrease of the coverage of source data and possibly to a decline of the statistical quality of national accounts statistics.

Regarding computing resources, the CBP has started a renewing program that has permitted DCN to count on updated and sufficient resources according to the current workload. Each of the 20 employees has a personal computer assigned (at the level of Intel dual core) and basic working software such as Excel. The DCN counts on an assigned server where most of the information is stored and protected. Additionally, on account of the rebasing project, more resources have been assigned to the DCN and new computers will be available to the staff.

Surveys and administrative data collection must be improved and expanded according to the new needs of source data defined by the authorities.

Domestic financial resources assigned to the DCN on occasion of the rebasing project have increased; therefore, it will not be necessary to depend on external funds (as it was the case in the previous exercise).

Recommendations:

¹ An official resolution creating eight new vacancies was released in mid February 2014.

- Develop and implement a long-term strategy for strengthening human resources in the DCN in order to expand and sustain the production of national accounts statistics. The strategy should consider the increase in the number of employees dedicated to the compilation and broadening of the scope of national accounts, including the implementation of new requirements of the *System of National Accounts 2008 (2008 SNA)*.
- Develop policy for retaining qualified staff (including returned postgraduate student), and a program for training new staff beyond the development and implementation of the new reference year.

0.2.2 Measures to ensure efficient use of resources are implemented.

According to Article 37 of the CBP's Charter, the CBP is externally audited, at least every two years, in relation to its administrative, financial and operative management. Staff performance evaluation carried out by the human resources department was discontinued a few years ago.

On other venue, although the CBP counts on a manual for managing the training programs for its staff, it should be applied according to the needs of each area as to avoid cases like the one currently observed in the DCN where almost half of the compilers (four out of nine) are currently abroad in postgraduate studies. While recognizing the enormous benefits of training, it is imperative to ensure continuity without sacrificing quality in the processes of statistical compilation.

The DCN, supported by CBP's authorities, seeks outside expert assistance to evaluate statistical methodologies and compilation systems.

Recommendations:

- A proper assessment of performance with incentives could be helpful for improving performance and creating professional stimulus to staff.
- A technical promotion ladder could be put in place to create an alternative to the managerial scale as to have more flexible option to promote (and retain) highly qualified and experienced staff.
- More specific rules should be put in place in order to organize a smooth turnover of staff without harming continuity nor preventing staff from further formal training.

0.3 Relevance

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.

Users are not formally consulted on their needs, and no structured mechanisms to identify new and emerging data requirements are in place. Informal contacts and meeting with other institutions and users are normally used to receive new requirements. Subject to budget constraints, national

accounts officials tend to participate in international courses, meetings and seminars, organized by the Economic Commission for Latin America and the Caribbean (ECLAC), the Southern Common Market (MERCOSUR) and other organizations.

Recommendations:

- Initiate regular consultations with public and private sector users, including through fostering users' groups and establishing an advisory committee to improve the usefulness of statistics and advice on statistical program priorities. The advisory committee should include participation of academics, private sector analysts, and producers' associations.
- Keep track and analyze users' requests made to the DCN periodically in order to improve the service provided to them.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The CBP authorities are aware of the importance of the quality of national accounts statistics, and they have, within existing budgetary limits, introduced improvements. Important steps in this direction have been: (i) the inclusion of the two binational hydroelectrical enterprises within the boundary of resident entities (according to the proportion of property); (ii) participation in the IMF's General Data Dissemination System (GDDS) and interest on identifying data gaps to participate in the IMF's Special Data Dissemination Standard (SDDS); (iii) the periodic requests of technical assistance to the IMF's Statistics Department and subsequent implementation of the main recommendations; and (iv) the project for updating the national accounts base year with CBP's own funds.

Excellence and professionalism are found among the values promoted by the CBP and within its strategic objectives.

0.4.2 Processes are in place to monitor quality during the planning and implementation of the statistical program.

Due to the implementation process of the 1993 SNA, compilers gained expertise on the analysis of source data, application of compilation methods and the assessment and validation of intermediate data and statistical outputs. This knowledge is systematically applied in the compilation process of the national accounts. Additionally, the compilation and revision cycles of the national accounts constitute in themselves a mechanism to monitor the quality of the national accounts.

1. Assurances of integrity

1.1 Institutional integrity

1.1.1 *Statistics are produced on an impartial basis.*

The CBP has developed and implemented an employees' *Code of Ethics* that strongly promotes good practices in subjects such as integrity, confidentiality, and technical excellence (chapters 3 to 5). Additionally, DCN's tradition is explicitly promoted to seek impartiality in the estimation of the statistics supported on procedures and documentation of decision making processes.

Recruitment is carried out by strongly considering relevant technical and academic aptitudes of applicants. According to the Article 14 of the *Staff Regulations* of the CBP, the selection, recruitment and/or hiring of applicants are conducted under a strict public competitive examination, based on background, skills, and open competition, and the results of entrance exams.

Additionally, the established ethical norms and on-the-job training point to the same objective. Periodic external assistance also works as means of supervision and promotion of practices of impartiality. Specific methodologies are publicly available (e. g., the change of base year, inclusion of binational entities in the national accounts), and participation on international activities works as a mechanism of promoting and validating the professionalism of the agency. Staff are encouraged to pursue professional training through seminars, regional meetings, and courses sponsored by the IMF and the INE-Spain, among others.

No outside influences are brought to bear on the process of compiling the national accounts statistics, which is exclusively made based on technical considerations. Institutionally speaking, the tenure of each of the Board members of the CBP (five members) is five years, and, with the exception of the CBP's President, one member is replaced every year as to give warranty of independence from the government cycle.

1.1.2 *Choices of data sources and statistical techniques, as well as decisions about dissemination, are informed solely by statistical considerations.*

The selection of source data and statistical techniques for the compilation of statistical series is based solely on statistical considerations. The choice of source data, whether from surveys or administrative records, and the selection of statistical techniques are based solely on measurement objectives and data requirements. Cost considerations sometimes determine the selection of sources. Decisions to disseminate data are based on technical, available staff number, timeliness, and cost considerations.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.

No formal or standardized mechanism is in place to comment on the interpretation or use given to the statistics; however, the CBP is authorized to do so. In fact, the DCN has made comments in the past though formal responses given by the board, through the media, or directly to users. It must be noted that annual and quarterly data are disseminated at a press conference along with descriptive notes.

1.2 Transparency

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.

The Charter of the CBP and other regulations include the terms and conditions under which the CBP's statistics are compiled and disseminated and are posted on the CBP website. Statistical users are well aware of the responsibility of the CBP on compiling the national accounts. Specific information on confidentiality and use of individual reporters' data is included in the presentation note attached to survey questionnaires.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified.

The national accounts are released simultaneously to all users and no person or institution outside the CBP has access to the data prior to its publication. This principle is strictly observed.

1.2.3 Products of statistical agencies/units are clearly identified as such.

Data released to the public are clearly identified as generated by the CBP, by showing its name and logo. In the case of joint publications, the name and logo of the data producing agencies are shown. Users of the information of the CBP generally cite the source (attribution) even when there's no explicit requirement to do so.

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.

Major changes in the conceptual framework, source data, and statistical techniques of the national accounts—such as the introduction of the base year 1994 and the adoption of the 1993 SNA—were announced to the public in advance. Major changes to the methodologies, such as the reclassification of the binational hydroelectrical enterprises from nonresident to resident (proportional to the ownership rights) was publicly announced in advance. The same approach was followed when the quarterly national accounts were released for the first time in 2010.

1.3 Ethical standards

1.3.1 *Guidelines for staff behavior are in place and are well known to the staff.*

The *Code of Ethics* approved by the CBP's Board of Directors Resolution No. 20 (July 30, 2008) is an instrument that contains the set of rules of conduct to be observed by CBP officials in the performance of their responsibilities within the institution and society, based on the values and ethical principles of excellence, reliability, integrity, accountability, transparency, commitment, service, teamwork, respect for institutions and individuals, professionalism, as defined in the Institutional Strategic Plan. The regulation imposes disciplinary sanctions on officials who fail to comply with these provisions.

Article 44 of the Staff Regulations clearly states that officials must adhere their conduct to the *Code of Ethics*, to the dictates of the law, morality and decency, and keep loyalty to the constituted authorities of the Nation and the CBP authorities. Personnel engaged in compiling the national accounts are aware and periodically reminded of the existence of these rules.

2. Methodological soundness

2.1 Concepts and definitions

2.1.1 *The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.*

The CBP undertook a project to update the reference period for its national accounts and to implement the 1993 SNA in stages. The new series were released in 2005, replacing the old ones, which were based on the outdated 1953 SNA conceptual framework and had an obsolete reference year (1982).

The concepts and definitions used to compile the new series are broadly consistent with the guidelines of the 1993 SNA, with exceptions that are due more to lack of data than to conceptual considerations.

Implementation of the 1993 SNA has been gradual with the series with 1994 as the base year and with some improvements since the 2006 ROSC Data Module mission. Currently, the major deviations from concepts and definitions established in the 1993 SNA involve investment in in-house development of software; investment in mineral exploration; investment in military expenses in fixed assets; the estimation of output broken down by market, nonmarket, and own final use components; the inclusion of work-in-progress in forestry and livestock production; and the partial inclusion of the nonobserved economy in the national accounts. The compilation of the national accounts by institutional sector was anticipated in the second stage of migration to the 1993 SNA, however due to the lack of resources this development was not implemented. Thus, these issues are kept under review and are on the agenda for the implementation of the 2008 SNA. It must be mentioned that,

the treatment of binational hydroelectrical enterprises is broadly in line with the most updated international guidelines.

The DCN is currently developing a plan for a major revision of its national accounts, which will consider the compilation of a new reference year as the base for the new series and the update of the classifications for activities and products. On occasion of this milestone, the DCN plans to incorporate the most relevant requirements of the *2008 SNA*, including the estimation of the accounts broken down by institutional sector.

Recommendation:

- Develop a detailed plan for migration to the *2008 SNA* with specific activities, scope of the changes, and implementation dates.

2.2 Scope

2.2.1 *The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.*

Although the CBP has not yet implemented the *2008 SNA*, the DCN compiles some of the *2008 SNA* tables and accounts that the ISWGNA² determine as minimum requirement for its implementation (which are consistent with the *1993 SNA* requirements). As listed below, the CBP compiles on a regular basis:

- Annual value added and Gross Domestic Product (GDP) at current and constant prices by activity
- Annual expenditures of GDP at current and constant prices
- Annual value added components at current prices by activity
- Sequence of accounts for the total economy (until net lending) with an annual frequency, in accordance to the *1968 SNA* guidelines.
- Quarterly value added and GDP at current and constant prices by activity
- Quarterly expenditures of GDP at current and constant prices

The CBP does not compile annual supply and use tables, which is one of the *2008 SNA* tables and accounts that the ISWGNA recommends for its implementation. The following required tables and accounts are not produced:

² Inter-secretariat Working Group on National Accounts identified the scope of the implementation of 2008 System of National Accounts – Data sets and details are provided in the document “Guidelines for monitoring the 2008 SNA implementation” (unstats.un.org/unsd/nationalaccount/docs/guidelines.pdf).

- Annual rest of the world accounts (until net lending)
- Annual nonfinancial corporation sector accounts (until net lending)
- Annual financial corporations accounts (until net lending)
- Annual general government sector accounts (until net lending)
- Annual household sector accounts (until net lending)
- Annual nonprofit institutions serving households (NPISH) sector accounts (until net lending)
- Quarterly sequence of accounts for the total economy (until net lending)
- Quarterly rest of the world accounts (until net lending)

The delimitation of the constituent units of the economy is broadly in accordance with the *2008 SNA*; in particular, territorial enclaves in the rest of the world are included as part of the economy as well as binational hydroelectrical enterprises

In the case of goods sent abroad for processing, goods that do not change economic ownership are recorded in exports and imports following the recommendations of the *1993 SNA*.

In particular, the following items are not in scope for output measurement:

- own-account production of all goods for own final consumption
- research and development for market and on own account
- output of goods for own-account fixed capital formation
- mineral exploration
- production of computer software
- illegal output sold to willing buyers
- production of entertainment, literary, or artistic originals

Items that are included in the assets boundary are in accordance with the *2008 SNA* but are not included in the scope of the national accounts of Paraguay:

- mineral exploration and evaluation (whether successful or not)
- systems and standard applications computer software and databases (purchased or built in-house) (coverage of databases is low)
- defense related assets that could be used for civilian purposes
- weapons systems such as warships, submarines, tanks, missile carriers and launchers, etc.
- valuables and historical monuments
- entertainment, literary or artistic originals
- research and development products
- leases and other transferable contracts (such as purchased goodwill)

In practice, the assets boundary is defined according to the *1968 SNA*. However, it was assumed that intangible assets' importance in Paraguay was low in 1994. Some of these intangible assets have gained importance during the last years (for example, mineral exploration and artistic originals) so they are in the scope of attention in the rebasing project. Among tangible assets, defense related assets that could be used for civilian purposes and valuables and historical monuments are also

excluded from the national accounts. Institutional sector accounts will be produced from the new base year within the context of the 2008 SNA implementation process.

Recommendations:

- Enhance the compilation of the sequence of accounts including the rest of the world accounts.
- Compile the national accounts by institutional sector when changing the base year.
- Resume the compilation of supply and use tables.

2.3 Classification/sectorization

2.3.1 *Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.*

The classification and sectorization used in the compilation of national accounts are partially consistent with internationally recommended systems. As for the classification of institutional units, NPISH are not separated from households (for example, when estimating their final consumption expenditure). Institutional sector accounts are not currently produced but are considered as one of the new developments from the new reference year.

Classification of transactions broadly follows the 1993 SNA.

Establishments and enterprises are classified by economic activity using a national industrial classification, which is compatible with the ISIC Rev.3. Products are classified according to the National Product Classification that is compatible with the CPC. Correspondence tables have been prepared, linking the national activity and product classifications to ISIC Rev.3 and CPC, respectively. Gross fixed capital formation is classified by type of asset, but not by economic activity. The Classification of Individual Consumption by Purpose (COICOP) is not applied to households' final consumption expenditure. Although a classification by function is applied by the MOF to the government expenditures, the DCN does not disseminate final consumption expenditure classified by the Classification of Functions of Government (COFOG), as recommended by the 1993 SNA.

Recommendation:

- Update the current classifications to ISIC Rev. 4 and CPC Ver. 2, and adopt COICOP and COFOG when changing the base year of the national accounts.

2.4 Basis for recording

2.4.1 *Market prices are used to value flows and stocks.*

The valuation rules used for recording transactions and stocks are broadly in accordance with the 1993 SNA. Market output is valued preferably at basic prices. Base year's estimates of output for own use were valued at equivalent market prices when feasible; otherwise they were measured at

costs, being this the second-best valuation consistent with the 1993 SNA. Subsequent years are derived by extrapolation.

Value added, sales, and excise taxes are included in the valuation of intermediate consumption, but the deductible part of the value added taxes is excluded. The deductible part of the value added taxes is excluded from the valuation of final uses, when data sources allow.

Transfer prices in domestic transactions have not been detected; consequently, corrections are not made. Also in transactions with the rest of the world, no adjustments are made to correct for possible over- or under-valuation of the amounts declared on exports and imports in the Customs forms.

Total imports and exports are valued on an f.o.b. basis. Transactions in foreign currency are converted using the quarterly averages of monthly exchange rates, which are in turn calculated as average of daily records.

2.4.2 Recording is done on an accrual basis.

Most transactions and flows are recorded on an accrual basis. Government revenues and some of the rest of the world flows are recorded on a cash basis. Government expenses are recorded on cash and on obligation basis, both of which might have deviations from an accrual basis. DCN uses the monthly report of executed budget (cash principle) since there is not clarity on the "obligado" basis, which has shown strong volatility (see 2.4.2 in the Government Finance Statistics (GFS)'s detailed assessment). Work-in-progress, where available data exist, is recorded in the period when the harvest takes place.

Recommendations:

- Work in close relation with the MOF to better understand its principles of recording as to derive a suitable adjustment to convert government expenditure data onto an accrual basis.
- Work-in-progress should be recorded on a cost basis along the crop's cycle period.

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.

Output of different establishments and activities in an enterprise are recorded on a net basis at enterprise level, since data collected is at the level of enterprises without establishment detail.

Recommendation:

- Survey program should account for integrated enterprise/establishment units and thus include differentiable information of establishments from that reported by enterprise they belong to.

3. Accuracy and reliability

3.1 Source data

3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.

Data collection program for national accounts in Paraguay rests on transfer of information from other governmental bodies, such as the Ministry of Agriculture, MOF, Ministry of Labor, Employment and Social Security, from other areas of the CBP, and direct information from key relevant enterprises. Most of the information collected comprises measures of output and/or sales. Thus, data collection is barely sufficient to compile national accounts since no information is collected for other very relevant variables of the national accounts such as intermediate consumption, inventories, final consumption expenditure, and fixed capital formation.

There is no statistical system in place that would provide annual statistics based on regular, comprehensive, exhaustive, detailed, and continuous structural surveys. Such a system is needed for national accounts compilation of good quality. Although a recent economic census has been carried out, there is a need for maintaining the collection of data on a continuous basis. In particular, data issues are found for some manufacturing activities, a significant part of nonfinancial services, household and NPISH, final consumption expenditure, gross capital formation, and changes in inventories.

On occasion of the forthcoming change of base year of the national accounts, some non regular available surveys and census will be used, namely: (i) the Population Census (2011), (ii) annual Households Surveys, (iii) a comprehensive Households Budget Survey (HBS) (2005-2006), (iv) an Agriculture Census (2006), and (v) the Economic Census (2010). Moreover, an updated Directory of Enterprises/Establishments has been generated and is planned to be updated during 2014. Although some problems have been detected and publicized with the population census, the DGEEC will start a reduced version of the census during 2014 in order to overcome some of the problems reported. This reduced exercise counts with the support of international collaboration, which has helped determining the best approach to follow.

Although enterprises balance sheets are available, they have not been explored due to resource limitations.

As mentioned before, partial information is collected directly for a specific group of enterprises on a monthly/quarterly basis, but no detailed and comprehensive survey program is in place. The new business register is currently being used by the CBP to update the number and classification of units included in the sample for data collection from the MOF (monthly total sales).

With regards to household data, there are three types of surveys that have different scopes and frequencies: (i) a comprehensive HBS; (ii) a permanent household survey (annual); and (iii) a continuous employment survey. The last comprehensive household survey was conducted in

2005/06, which results will be incorporated in the estimates of the new base year. Although authorities are well aware of the need of carrying out a new survey, there are no specific plans to do so. The comprehensive household survey covered urban areas within the Great Asunción. A two-stage stratified random sampling technique was applied, and proper imputation methods were used to deal with nonresponse. Grossing-up factors are derived scientifically from the population census. On the other hand, the annual household survey has a national coverage (excluding two areas with low representation). The continuous employment survey covers areas of the Great Asunción.

Comprehensive and timely information is available for government units, except for the operations of decentralized government. Although the most important local government bodies are included, the coverage is incomplete. The data cover, in particular, operation of extrabudgetary funds, and all defense-related expenditures. Data on investment projects are checked to reclassify current expenditure (for example, training). Detailed data permit the measurement of output, intermediate consumption, fixed capital formation, and final consumption expenditure of government services. However, data on capital stocks are not available.

Data collection from administrative records is timely and detailed at the level of economic activities. However, it is necessary to periodically update the sample and classification of the units for which the information is collected in order to keep activity representativeness and a correct allocation.

Price statistics are available at a good level of detail for agriculture products. Prices of numerous agriculture products are collected by the Ministry of Agriculture and provided on a monthly basis to the CBP. The Consumer Price Index (CPI) has been updated in 2008 following the modified Laspeyres index methodology. Besides updating the weights of the products within the basket, it has increased the level of detail in number of goods and services (450); it has improved the statistical techniques used in the validation and compilation process. Meanwhile, the Producer Price Index (PPI) has been recently updated (2011) along the same lines of the CPI. A mixture of unit values and imported component of PPI are used to deflate exported and imported products. The prices for products are generally consistent with the variables being deflated in terms of price concept (except the mentioned unit values), coverage, detail, and reference.

Comprehensive and exhaustive data for the financial sector are collected from the CBP's area responsible of bank supervision.

Most of the source data received by the DCN corresponds to monthly figures. In this framework, the CBP started compiling a Monthly Index of Economic Activity (IMAE) in 1991 and has been releasing the index ever since. In addition to the administrative sources used to construct the index, a small group of leading enterprises that generates a significant part of the total production in their respective economic activities is surveyed every month. The construction of the index is carried out at the level 33 economic activities and such estimates are used in the quarterly compilation of GDP by economic activity and, in some cases, in the preliminary estimates of the annual GDP. The index was revised along with last change of base year. The index is disseminated in the CBP's Monthly Bulletin. Informal contacts are done, on a non-regular basis, when supplementary information is needed.

Recommendations:

- Further use should be given to enterprise balance sheets as to complement missing information and as a cross-checking tool.
- Develop and conduct a program of structural annual surveys to cover and complement certain specific activities and other components of the accounts. Surveys should include minimum requirements of information for the national accounts such as output (including secondary production), revenues, input details and costs, gross fixed capital formation, employment, and inventories of raw material, finished goods, and goods for resale.
- Update the business register regularly by using income and value added tax records.
- Conduct a new HBS and establish a schedule to conduct such survey every five years to strengthen estimates for household final consumption expenditure.
- Collaborate on the review and regular update of the business register and its classification by economic activity so that the CBP can use tax records data with an improved classification.
- Exploit and use available information from balance sheets reported to the international department, since they contain valuable information for the national accounts.
- Evaluate the possibility of conducting a quarterly survey on production for manufacturing and quarterly sales of services, as well as on inventories of inputs and finished and resale products.

3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required.

Source data broadly approximate the definitions, scope, classifications, valuation, and time of recording required to compile the national accounts. Some sources have their own classification systems, but the national compilers establish, as much as possible, their correspondences with the national accounts classifications. It is expected that some deviations from the right time of recording exist; for instance, sales data are not corrected by changes in inventories so as to derive output measures.

Coverage of the total economy in terms of economic activities is fairly adequate; however, the coverage within each economic activity differs from one another. Lacks of coverage are observed in some manufacturing industries, and a significant part of private nonfinancial services.

Recommendations:

- Improve the coverage of the sales data by requesting an updated sample to the MOF.
- On an annual basis, explore inventories data contained on the available collected balance sheets.

3.1.3 Source data are timely.

Most of the monthly source data are collected in a timely manner, which includes price statistics, administrative records, and direct data collection. There is a rigorous follow-up procedure in place in order to fulfill the requirements for the compilation of the IMAE. In the case of the surveys, visits are made to collect the questionnaires. In particular, special arrangements have been agreed with the MOF, the Ministry of Agriculture, and other institutions providing data from administrative records and the information is received on time. However, data on international trade are available with a very tight schedule, generating, sometimes, a bottleneck in the dissemination of the quarterly GDP, as data on expenditure and production are released simultaneously.

Recommendation:

- Conduct meetings with the Balance of Payments Division to assess the possibility of reducing the current time lag in delivering trade data.

3.2 Assessment of source data

3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.

Although the accuracy of surveys and administrative sources is analyzed in the context of revisions, the statistical framework is not monitored on a continuous basis, so coverage is assessed irregularly. Significant changes from available up-to-date data are incorporated into the national accounts statistics, according to the revision cycle, preventing the accumulation of revisions over long periods of time. Data on exports and imports are revised when new figures are received from the CBP's International Economy Department. The data received from the different sources are analyzed to check for temporal consistency and also checked with other related source data. For example, the production of agriculture goods that are significant inputs of industrial activities are compared with the intermediate consumption/production of the corresponding industrial activity. On the same venue, products whose main destination are exports are cross checked with trade figures. Extreme values are confirmed with respondents.

GFS, merchandise trade statistics, volume and price statistics, and most data sources used to compile national accounts statistics are routinely assessed, and revisions are monitored.

Recommendations:

- Design and establish a regular process of assessment of the coverage of samples used to obtain administrative data.
- When appropriate, ensure the realization of the sample design with a robust statistical approach.

3.3 Statistical techniques

3.3.1 Data compilation employs sound statistical techniques to deal with data sources.

Data computation procedures are adequate in the case of the survey conducted by the DCN, for use in the IMAE and hence for the QNA. The validation and verification process is carried out directly by the compilers on self-developed procedures. As explained above, adjustments to unit records are made only when clearly warranted, for which purpose historic information is compared with secondary or indirect data. Imputation for nonresponse is based wherever possible on data for similar type of enterprises; however, efforts are made to attempt respondents to provide information at least on certain relevant variables or review/correct those found abnormal.

Basic validation tools are in place as to minimize processing errors such as coding, editing, and tabulation errors. Some pieces of information are collected in paper or in pdf format, forcing manual transcription and increasing the likelihood of typing errors.

Recommendations:

- Apply a computer system for basic data validation controls.
- Request data providers to submit the information in formats that can be directly up loaded in the DCN's processing system.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.

Production approach procedures

The production approach follows the level of detail compiled in the base year 1994, comprising the 33 economic activities of the national activity classification, which has a direct correspondence with ISIC rev.3 at a two-digit level. Output at constant prices is extrapolated by means of quantum indicators or by deflated value series. In particular, a volume index of sales is constructed based on sales data from the value added tax forms for most activities, by deflating the value index of sales by activity by an appropriate price index. For construction, a volume index of main inputs is applied. Information for government services is obtained from the budget execution records produced by the MOF, which is deflated by the general CPI. Financial intermediation is derived from detailed financial statements collected by the CBP and deflated by the CPI.

Intermediate consumption is computed for the same level of detail. For the great majority of activities (nearly 70 percent of the value added), intermediate consumption/output coefficients are applied to output at constant prices to derive intermediate consumption at 1994 prices. Gross value added is obtained as a residual. This procedure is supported by the assumption that production functions tend to change slowly in volume terms (incorporation of new technology, or adaptation to long term change of prices), so fixed input/output ratios could be applied in the short-run.

Nevertheless, in the case of Paraguay, these fixed coefficients are about 20 years old. The base year 1994 is not representative of the current economic situation.

Current price estimates are derived by inflating constant price estimates. Appropriate deflators are compiled following the composition by products of the intermediate consumption of each activity, according to the activity's absorption as calculated in the 1994 technical coefficients. The most appropriate available individual corresponding PPI/CPI are aggregated to the corresponding activity level series in current prices. A similar approach is followed for gross output at current prices. Value added at current prices is obtained as a residual.

Informal sector activities are not independently estimated in the time series by using available data on employment, income and salaries, which implies that a constant relative participation (as estimated in 1994 base year) with respect to the formal production is implicitly extrapolated. In connection to illegal activities, estimates are made for smuggling in the balance of payments (BOP), which are also included in the national accounts estimates.

The following techniques are used to deal with some specific issues of GDP compilation:

- For owner-occupied dwellings, output is valued as the estimated rentals that tenants would pay for a similar dwelling. The stock of dwellings and its classification by type are based on the 1992 Population and Housing Census. The time series is constructed by extrapolating the stock by the volume index of the construction activity and applying the rentals sub index of the corresponding components of the CPI.
- Growing crops are treated as work-in-progress on the basis of the time distribution of the corresponding costs but allocated in the year of harvest and not according to the crop cycle.
- The data of consumption of fixed capital recorded in the accounts are based on the fixed ratios obtained in the base year.
- Data on government transactions are available in cash and "obligado" basis, and they are recorded on cash basis in the national accounts. Although "obligado" is expected to be an approximation to accrual basis, it does not adequately reflect an accrual recording. In fact, the sums of values registered as "obligado" do not generally match the budget execution nor reflect the right time when economic activity effectively takes place. Adjustments in the timing of disbursements in fiscal records (creating a concept of floating debt) show that time series constructed by taking this basis of recording exhibits very irregular movements.
- Financial intermediation services indirectly measured (FISIM) domestically produced are allocated to resident users on the basis of the distribution of credits provided by the banks, without making use of a reference rate of interest mentioned by the 1993 SNA. The FISIM allocation to households does not distinguish between households as producers or final consumers. No allocation is made to the government.

Regarding procedures for compiling volume measures of GDP, the following issues are noted:

- As explained above, extrapolation by single volume indicators of output (or sales at constant prices, in various cases) are used to estimate output at constant prices. Fixed base year coefficients are applied to derive value added. Double deflation is used for government and financial activities.
- Taxes on products are estimated by extrapolating the base year taxes by a volume index of the supply of goods to domestic users (as a proxy to volume indices of sales subject to corresponding taxes). This approach corresponds to applying fixed ratios of taxes to those activities that produce nondeductible taxes.
- Similar to the method for estimating taxes, trade margins in constant prices are derived by extrapolating the 1994 year-trade margins with volume indices of sales of tradable goods, or alternatively, with volume indices of production of tradable goods.
- Work-in-progress of agricultural crops are distributed according to an estimated pattern of disbursement of costs during the whole production cycle, as estimated for the base year, but it is then allocated in the year of harvest, which introduces strong breaks from year to year if atypical weather conditions occurs, for instance. Costs distribution has been maintained fixed since 1994.

Expenditure approach procedures

When applying the expenditure approach, the following aggregates are independently estimated: government final consumption expenditure, gross fixed capital formation, and exports and imports.

Household final consumption expenditure at constant prices is obtained for each year by applying the percentage represented by the household consumption in the 1994 supply and use table to the total supply of each of the 46 products at constant prices. This implies an excessive use of fixed coefficients. The CPI by product or group of products is applied to obtain current value measures.

The aggregated series of changes in inventories are obtained as the balancing item of GDP by the production approach and the estimated expenditure components. This procedure hinders a fair assessment of the quality of such a residual since it contains all statistical discrepancies. Additionally, it was observed that changes in inventories for the whole series are positive (systematic accumulation) and relatively high with respect to total GDP at constant prices, which has no economic sense (as goods deteriorate over time and it is costly for enterprises to maintain high levels of inventories for long periods of time). Implicit price indices of changes in inventories are inconsistently erratic. Such results suggest that there could be some inaccuracy in other estimated components.

With respect to final expenditure components classification:

- Household final consumption expenditure is not compiled by purpose.

- Government final consumption expenditure is generated at an aggregate level, and consequently not classified by function, although a functional classification of government expenses is done by the MOF.
- Gross-fixed capital formation is compiled by type of assets (construction and machinery and equipment), but not by activity, since the commodity flow method is applied to estimate its value.
- Exports and imports are consistent with BOP data, which include major estimates for unrecorded foreign trade. Unit value indices are applied for most of the items to estimate flows at constant prices.
- Current values and volume estimates of changes in inventories are derived residually as the balancing item of total GDP estimates from the expenditure to the production approach.

In relation to the techniques used to address specific issues of the expenditure approach, the following are noted:

- Government final expenditure excludes incidental sales.
- Expenditures of residents abroad are included in household final consumption expenditure and in imports. However, expenditures of nonresidents in the economy are included in exports, but not excluded from household final consumption expenditure.
- Expenditures on items that are considered stores of wealth (such as, jewelry, works of art) are not included in gross fixed capital formation as no detail information is available for valuable items.
- Government final consumption expenditure is derived by deflating cost components of output for final use, with the exception of compensation of employees, which are extrapolated by a volume index of government's employment.

Specific quarterly compilation techniques

The DCNMI produces and disseminates quarterly national accounts at constant 1994 prices as well as at current prices. Both production and expenditure approaches are compiled. Sources of the production approach are consistent with the annual data and are available mainly on a monthly basis. Volume indexes are constructed and then used as indicator series by economic activity under the single indicator approach.

Household final consumption expenditure at constant prices is obtained by deflating total domestic sales of consumer goods by appropriate price indexes. Gross capital formation is derived by using a composite indicator that comprises construction activity, imports of capital goods and capital government expenses. International trade is provided by the International Economy Department

(along with unit values). Government consumption is derived following the same methodology of the annual compilation. Changes in inventories are derived residually (exhibiting odd fluctuations).

An appropriate benchmarking technique such as the proportional Denton technique is applied to align quarterly indicators to annual estimates. Series in current values are derived by inflating constant price estimates previously derived. Quarterly base year's figures at current and constant 1994 average prices are the same, which signal the very unlikely behavior of null evolution of prices for each quarter of 1994. The quarterly compilation system derives quarterly series from original series, thus providing unadjusted quarterly estimates.

Seasonally adjusted GDP is estimated using the X-12 ARIMA; an internationally accepted procedure.

Monthly index of economic activity (IMAE)

The IMAE is a Laspeyres volume index obtained by integrating the monthly production (or deflated sales) indices of relevant industries by the composition of value added in 1994 (consistent with the national accounts base year). Most of the information for the primary industries, a significant portion of food industry, electricity, and construction correspond to volume indices, while most of the secondary and tertiary industries are constant price sales, some of which are partially combined with other complementary volume data. In particular, the financial sector and government services are derived from official records (as described in previous sections). The index was conceived to cover all activities comprising GDP as estimated in 1994. However, coverage in each individual indicator varies. In particular, the production of some manufacturing activities and personal and business services present certain deficiencies in coverage. Seasonally-adjusted data are calculated by using the X-12 ARIMA.

Recommendations:

- Abandon the single indicator approach for the estimation of volume figures.
- Reinforce the capacity for developing independent estimates of the accounts in current values.
- Resume the production of the supply and use tables as compilation and validation tool for the national accounts.
- Derive independent estimates for final household consumption expenditure (exploiting alternative data sources such value added tax records)
- Move to chained indices for the compilation of volume measures from the new base year.
- Make independent estimates of informal sector activities regularly.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information, where applicable.

When alternative independent data are available, main national accounts sources are cross checked. Certain information from enterprises surveys is assessed against enterprises financial statements, other administrative sources and information obtained from producers' unions. Production data of crops, which is obtained from the Ministry of Agriculture, are validated against foreign trade statistics when appropriate (significant proportion of production is exported). In any case, alternative independent information is very limited.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Whenever discrepancies in intermediate data are detected, they are assessed, investigated and reconciled or removed, as appropriate, in line with available information.

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.

Due to the discontinuance of the supply and use framework, the capacity of analysis of discrepancies was severely reduced. For the period 1991–1997, the national accounts aggregates are consistent in terms of supply and use at the level of 46 products and 33 activities with the corresponding expenditure counterparts. Thereafter, given the calculation method to derive the expenditure approach, discrepancies remain embedded in the balancing item, say, changes in inventories. The production and expenditure approaches are not independently estimated.

In the very exceptional cases that unofficial estimates on GDP aggregates have been publicly released, DCN has made research to determine the validity of such estimates. Results of the assessment have been used internally.

3.5 Revision studies

3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).

Adequate documentation on the analysis of major revisions, such as the change in the base year, is made publicly available and includes description of causes of revisions. When GDP figures change with respect to the preliminary estimates, revisions are internally explained but not published.

Recommendation:

- Perform revision studies regularly as to determine whether systematic biases are affecting the estimates.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 *Periodicity follows dissemination standards.*

National accounts statistics, in particular GDP estimates, and IMAE meet GDDS periodicity standards.

4.1.2 *Timeliness follows dissemination standards.*

Annual GDP estimates are disseminated nine months after the end of the reference year fulfilling GDDS requirements. The CBP also disseminates quarterly GDP estimates, within three months after the end of the reference quarter (encouraged in the GDDS). IMAE meets GDDS timelines (up to 12 weeks).

4.2 Consistency

4.2.1 *Statistics are consistent within the dataset.*

Reconciled GDP estimates are derived by the production and the expenditure approaches in current and constant prices. Income approach of GDP is consistent with the other two approaches in current prices. Similar and consistent growth rates are obtained from the series of GDP by activity and GDP by expenditure category. GDP estimates at current prices, volume measures, and implicit deflators are consistent within the “value = volume × price” framework. Discrepancies between supply and expenditures are adjusted as part of changes in inventories since supply sources are considered more reliable than those of the expenditure side.

4.2.2 *Statistics are consistent or reconcilable over a reasonable period of time.*

From the previous rebasing exercise base and including the revision of the binational hydroelectrical enterprises, a consistent system of time series for national accounts data were produced for 1991–1997. From 1998 onwards, GDP by activities, expenditure, and income components are compiled consistently. Quarterly GDP as well as IMAE are disseminated as consistent time series from 1994.

In turn, GDP time series was retroplated back to 1962, by applying consistent growth rates to those obtained with the 1982 reference year series. Series are available on request.

Recommendations:

- Reconstruct historical series as far back as reasonably possible for the main national accounts aggregates. Make long time series available on the CBP website, along with the methodologies applied.
- Include the linked time series on the excel sheets and make the option for requesting longer time series known to users.

4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.

National accounts statistics are broadly consistent with BOP, government finance statistics, and other related statistical frameworks. External trade, monetary and GFS are reconcilable with national accounts estimates since the data sources used in their compilation are the same. For example, (i) investments in public finance statistics may contain current expenditures, such as training, which national accounts compilers exclude to calculate the value of gross fixed capital formation; (ii) employment insurance schemes are included in the financial sector for national accounts purposes, but GFS include them in the government sector.

4.3 Revision policy and practice

4.3.1 Revisions and/or updates follow a regular and transparent schedule.

The regular publication cycle of the national accounts, in annual terms, includes a first annual release corresponding to the publication of the last quarter by the QNA, in March of each year. These results are made public through the quarterly report (data are updated on the website). Later, in September of the same year, the first release of the annual national accounts estimate for the preceding year is disseminated on the annual report of the national accounts, implying the first revision. At the same time, a revised version of the annual accounts for the preceding year to the previous year (two years ago) is released (second revision) in the same report. In this manner, the permanent revision cycle for the annual figures includes 2 revisions. Major revisions are carried out on an ad hoc basis. The revision cycle has been established taking into account timeliness of data sources and timing of the preparation of economic policy documents and the CBP's Annual Report. The revision cycle is disseminated in advance to general public.

QNA is framed within the annual cycle since both sets of statistics are made consistent so any change in the annual accounts will have an effect on the quarterly version. In addition to revisions derived from the annual cycle of revisions, quarterly figures are revised during the current year, as new data become available.

4.3.2 Preliminary and/or revised/updated data are clearly identified.

Preliminary nature of the estimated aggregates at the time of data dissemination is clearly identified, but not their nature of revised data.

4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).

Major revisions are analyzed and made public, such as the recent adoption of the 1993 SNA and a new base year, detailed explanations on the differences between the new and the old series were prepared. Moreover, documentation on the analysis of the revisions due to the incorporation of nonresident entities to the domestic economy was extensively documented and presented in public media.

On the other hand, analysis and assessment of revisions and the causes of revisions of preliminary data are partially prepared (for internal use), but not provided to the public.

In relation with studies of revisions, as noted under 3.5.1, no revision studies have been done; consequently, no results have been disseminated.

Recommendation:

- Incorporate within the routine tasks of compilation of statistics, the analysis of revisions and include an explanatory paragraph in the published documents.

5. Accessibility

5.1 Data accessibility

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).

Annual national accounts statistics are disseminated on the CBP website and in the annual publication *System of National Accounts of Paraguay*.³ This publication includes charts, tables and a summary analysis of the data. QNA results are made public by means of an analytical report, a press release (presentation carried out to selected users the day of publication), and a statistical annex which includes excel tables with data.⁴

IMAE is disseminated in the Monthly Economic Report which publishes, among others, a brief explanatory description of the evolution of the economic activity as it is measured by the index.⁵

5.1.2 Dissemination media and format are adequate.

In addition to was noted above, annual and quarterly national accounts data are disseminated on the website though excel files.⁶ Tables include different levels of details.

Recommendation:

- Consider the possibility of developing a flexible user-friendly database that permits to optimize the management the information on an interactive way since some of series are presented on different tables. It will reduce the burden of dissemination and minimize the chance of errors and inconsistencies.

³ <https://www.bcp.gov.py/cuentas-nacionales-anuales-i406>.

⁴ <https://www.bcp.gov.py/boletin-de-cuentas-nacionales-trimestrales-i371>.

⁵ <https://www.bcp.gov.py/informe-economico-mensual-i361>.

⁶ <https://www.bcp.gov.py/boletin-de-cuentas-nacionales-anuales-i370>.

5.1.3 Statistics are released on a preannounced schedule.

An advance release calendar for the data is publicly posted on the CBP website.⁷ National Accounts Statistics are usually released on the preannounced schedule.

5.1.4 Statistics are made available to all users at the same time.

National accounts statistics are made available to all interested users simultaneously through the website and press release when appropriate, in accordance to the dissemination calendar.

5.1.5 Statistics not routinely disseminated are made available upon request.

Additional and more detailed statistics from those publicly disseminated are provided to users upon request when available and subject to confidentiality safeguards. This option is not disclosed to the public.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

Documentation on sources and methods was published on the occasion of the dissemination of the 1994 base year in 2005. The dissemination of the QNA, the enhancement of IMAE's methodology,⁸ and the methodological change of treatment of binational hydroelectrical enterprises⁹ are also accessible through the CBP website. As described in 2.11 and 2.2.1 above, various deviations exist with regard to internationally accepted standards; however, few of them have been annotated in the documentation. At the time of the mission, the GDDS metadata posted on the IMF's Dissemination Standards Bulletin Board (DSBB) had not been updated since 2004.¹⁰

Recommendation:

- Update and maintain current the metadata available in national publications as well as the GDDS metadata posted on the IMF website.

5.2.2 Levels of detail are adapted to the needs of the intended audience.

More specialized user's information such as working documents is not sufficient. Updated general methodologies are available to inform general users about the statistical series.

⁷ <https://www.bcp.gov.py/calendario-de-reuniones-y-publicaciones-i16>.

⁸ <https://www.bcp.gov.py/notas-metodologicas-i131>.

⁹ <https://www.bcp.gov.py/articulos-de-investigacion-i56>.

¹⁰ Revised national accounts metadata were posted on the IMF's DSBB in March 2014.

Recommendation:

- Include detailed methodologies within the available documents on the CBP website as to provide more information regarding detailed compilation procedures to more specialized users, including on informal sector activities.

5.3 Assistance to users**5.3.1 Contact points are publicized.**

Prompt and knowledgeable service and support are available to users of national accounts statistics. The address, phone, and fax numbers of the CBP is available on its website and publications, but there is not a specific contact point for national accounts.

There is no established procedure to satisfy consultations made to the DCN, and assistance given is not monitored.

Recommendation:

- Define/create a specific contact point to make it available to users.

5.3.2 Publications, documents, and other services, including information on any charges, are widely available.

Lists of publications, papers, press releases, and other documents are available on the CBP website.¹¹ The publications can be downloaded from the website or consulted at the CBP's library. Publications are free of charge to users.

¹¹ <https://www.bcp.gov.py/investigaciones-y-estudios-i54>.

Table 1. Data Quality Assessment Framework (May 2012): Summary of Results for National Accounts Statistics*(Compiling Agency: Central Bank of Paraguay)*

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; GDDS = Complies with GDDS Criteria							
Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
0. Prerequisites of quality							
0.1 Legal and institutional environment			X			Data sharing with the DGEEC and with other governmental institutions are not supported by formal agreements. The CBP law states that data must be delivered to the institution to fulfill its functions, but no coercing faculties are in place.	Formalize official agreements with public entities that currently share information with the DCN. Sign an agreement with DGEEC as to establish a fluent exchange of detailed information. Modification of the CBP's law.
0.2 Resources				X		The National Accounts Section has severe human resource constraints. Experienced staff are at a minimum level to produce current products, which poses a risk of continuity in the production of statistics, hinders quality improvements, and impedes new developments.	Increase of the number of staff in the DCN for the new base year project. Hiring of a national accounts expert to, among other things, train the new staff.
0.3 Relevance			X			Periodic contacts with users are on an informal basis, but there are no formal procedures to assess user's data needs.	
0.4 Other quality management		X					
1. Assurances of integrity							
1.1 Institutional integrity		X					
1.2 Transparency		X					
1.3 Ethical standards		X					

Table 1. Data Quality Assessment Framework (May 2012): Summary of Results for National Accounts Statistics (cont'd)

(Compiling Agency: Central Bank of Paraguay)

2. Methodological soundness							
2.1	Concepts and definitions			X		The general structure of the national accounts broadly follows the 1993 SNA. Some deviations are observed. A plan to migrate to 2008 SNA is under the scope of the new base year project.	A project for compiling a new reference year is under development.
2.2	Scope				X	GDP is compiled by production, expenditure (annual and quarterly, current and constant prices) and income approaches (by industry). Rest of the world accounts are not compiled. The national accounts by institutional sectors are not compiled. Supply and use tables were suspended in 1998. Full sequence of accounts on a quarterly basis have not been developed (2008 SNA). Own-account capital formation, mineral prospection, and illegal output are not estimated.	Migration to main 2008 SNA is considered under the scope of the new base year.
2.3	Classification/sectorization			X		Current classifications are based on ISIC 3 and on CPC. No classification by purpose or function is applied (COICOP, COFOG). NPISH are not estimated separately from household sector.	Migration to the most updated classifications is being considered among the tasks of the change of the base year project.
2.4	Basis for recording			X		Government revenues and some transactions with the rest of the world statistics are recorded on a cash basis.	
3. Accuracy and reliability							
3.1	Source data				X	No annual survey program is in place. No up-to-date business register is available. Household Budget Survey (HBS) is outdated. Financial statements of nonfinancial enterprises are not used.	
3.2	Assessment of source data			X		No regular assessment of samples from the business registers is performed. Coverage of administrative data is partially monitored.	An updated enterprise sample is under development.

Table 1. Data Quality Assessment Framework (May 2012): Summary of Results for National Accounts Statistics *(concluded)**(Compiling Agency: Central Bank of Paraguay)*

3.3	Statistical techniques			X		Fixed ratios from 1994 (20 years old) are used to obtain about 70 percent of GDP. No explicit adjustments are made for non-observed activities. Household consumption expenditure is not independently derived. Changes in inventories are obtained as residual for the total economy. Work-in-progress is only recorded for few products.	A project for compiling a new reference year is under development. It considers an update of follow-up methodologies.
3.4	Assessment and validation of intermediate data and statistical outputs		X				
3.5	Revision studies			X		No revision studies are carried out. Only major revisions are analyzed and made public.	
4. Serviceability							
4.1	Periodicity and timeliness		X				
4.2	Consistency		X				
4.3	Revision policy and practice			X		The cycle of regular revisions have a regular schedule. Regular revisions are not analyzed on public documents.	
5. Accessibility							
5.1	Data accessibility		X				
5.2	Metadata accessibility			X		Some technical documentation is available. Few references to deviations from international standards are made public. GDDS metadata had not been updated since 2004. Revised national accounts metadata were posted on the IMF's DSBB in March 2014.	
5.3	Assistance to users			X		No formal procedure to satisfy consultations from users is in place. Only a generic e-mail address is available.	

PRICE STATISTICS (CONSUMER PRICE INDEX)

0. Prerequisites of Quality

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.

The Consumer Price Index (CPI) of Paraguay is produced and disseminated by the National Accounts and Domestic Market Department (DCNMI) of the Office of the General Deputy Manager for Monetary Policy (SGGPM) of the Central Bank of Paraguay (CBP). In 2013, a new organizational structure was adopted by the CBP. However, in the case of the DCNMI, this new structure has not yet been implemented and the production of price statistics is carried out using the former organizational structure. The responsibility for the compilation and publication of price indicators for the domestic market is clearly attributed to the CBP in Article 82 of Law No. 489/95, which defines the fundamental rules and principles governing the CBP.

Despite the existence of Decree-law No. 11.126 of February 1942, which assigns to the Directorate-General of Statistics and Census (DGEEC) the role of compiling consumer and other price statistics, the production and dissemination of the CPI has in practice always been carried out by the CBP (i.e., since the start of the compilation of this indicator in 1938).

0.1.2 Data sharing and coordination among data-producing agencies are adequate.

The coordination among data-producing agencies is adequate. The samples used in the household budget survey (HBS), which are conducted to derive the basket of products and CPI weights, are drawn from Census Areas (AEs) sampling frames provided by the DGEEC. The most recent HBS was conducted in 2005-2006 and was carried out under an agreement delegating specific tasks to the DGEEC.

0.1.3 Individual reporters' data are kept confidential and used for statistical purposes only.

The preservation of confidentiality of respondents' provided data are guaranteed under Article 80 of Law No. 489/95. In addition, Article 82 stipulates that statistics must be published in an aggregated form and omitting any individual reference.

CBP's staff that, by virtue of their duties, have access to confidential and privileged information are obliged to exercise full data discretion and comply with statistical secrecy requirements. Infractions to this rule fall under the disciplinary system of the CBP and staff are subject to sanctions and penalties (Article 88 of Law No. 861/96; the General Law on Banks, Financial Companies, and Other Credit Institutions).

0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.

According to Article 80 of Law No. 489/95, public institutions, banks, companies, and other entities involved in financial intermediation, as well as private sector enterprises, shall have the duty of collaboration with the CBP and shall provide the data and information needed for the fulfillment of its functions.

Respondent's misreporting and nonresponses are not subject to any penalties or sanctions. However, in the case of the CPI, the DMI seeks to promote goodwill and secure cooperation by explaining the purpose of data collection in official letters to future respondents or, if needed, by contacting directly them.

0.2 Resources

0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.

The Domestic Market Division (DMI) of the DCNMI comprises of a team of 23 staff working in the production of price statistics (one division chief, three section chiefs, nine supervisors, and ten price collectors).

The team is responsible not only for the monthly compilation of the CPI but also for the monthly Producer Price Index (PPI) and a half-yearly wage index (an estimate of the CPI is also calculated by the 15th of each month for internal purposes). In addition, CPI staff participates in other projects, such as the 2011 round of the International Comparisons Program (ICP) of the World Bank (finished in 2013).

As of March 2013, a new field work organization was implemented in response to a decrease in the number of human resources attached to the DMI, which was essentially caused by the retirement of experienced staff. As a result of this reorganization, the number of price collection teams was reduced from nine to eight. In order to cope with the volume of processed information, supervisors are engaged in both supervision and price collection activities and the three teams specialized in PPI price collection tasks have been merged with CPI units and participate in the collection of information for all indicators covered by the DMI.

Although able to maintain the regular production of the three indicators, current staff number is not adequate for improvement work and data collection activities.

The qualifications of the present team are adequate. The division and sections chiefs of the DMI have university degrees and training in the field of economics and statistics. Price collectors must hold a bachelor's degree with introductory courses in economics. Supervisors have a minimum of three years of experience in price collection activities.

The average length of service for the division and sections chiefs exceeds ten years. In the case of supervisors and price collectors, the average length in service is three to four years as a result of staff turnover to other units of the CBP.

DMI staff have benefitted from training through participations in international courses, seminars, and workshops on the CPI, as well as in courses organized internally by the department.

The promotion system in place in the CBP is based on automatic increases in the job category scale after a certain number of years. The remuneration of the CPI staff is competitive by comparison with other public sector employees.

Computer and software resources available for CPI production significantly improved since the 2006 ROSC Data Module mission and are adequate to perform required tasks. A computer is assigned to each staff member, and five printers are available in the division producing the CPI.

The database and data processing system supporting both the CPI and PPI represent an upgrade in relation to the previous data processing structure. It has the following features: (i) manages the inclusion and exclusion of varieties; (ii) generates price validation reports; (iii) includes a routine for the imputation of missing prices; and (iv) provides monthly reports with information on the prices survey coverage of outlets and observed prices, as well as about the proportion of imputed prices and its cause. The DMI is planning to move from paper price collection forms to tablet PCs. A Windows Mobile application is being migrated to Android and will allow the collection of CPI and PPI data on PDAs (the migration is expected to be finished by mid-2014).

The premises and office equipment assigned to the personnel that compile and disseminate the CPI are appropriate. The number of vehicles assigned for price collection is ten. The vehicle fleet is new (one year old) and is considered appropriate for the support of price collection activities.

The budgeting practices are adequate to perform the tasks associated with the regular production of the CPI.

Recommendation:

- Hire additional price collectors and staff to reinforce the analytical and developmental capabilities of the CPI team.

0.2.2 Measures to ensure efficient use of resources are implemented.

Monthly field work is planned subject to resource availability and a specific schedule of visits, which takes into account factors such as the number of visits and travel distances required for each data collection area. A comparable process is used for assigning vehicles.

Prices are entered into the data processing system throughout the month, so as to prevent the accumulation of work and paper forms. This ensures that the workload for prices can be handled in line with the schedule for data processing and presenting results.

As part of the appraisal process, the Office of the Manager for Institutional Development maintains a systematic record of staff arrivals and departures, and the number of hours worked by each staff.

The finance department of the CBP monitors the execution of the budget associated to the CPI.

0.3 Relevance

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.

The CPI is the inflation indicator of Paraguay and is widely used and known. Although a periodic and formal process of consultation on the utility of the CPI has not been established, new users' demands are identified and satisfied. For instance, recently a new price index series on cement prices was produced to respond to the needs of the construction economic sector (<https://www.bcp.gov.py/userfiles/files/CARTILLA-CEMENTO.pdf>).

The DMI presents the results of the CPI (together with the PPI) on a monthly basis in a press conference where the media is invited to pose questions about the results. Particular concerns and/or users needs are passed forward by the CBP's press unit and subsequently addressed by the DMI.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The authorities recognize the importance of the CPI and are well aware that a constant improvement effort is needed to maintain and improve its quality. Outside experts were hired to provide assistance to the DGEEC and CBP in the preparation of the 2005-2006 HBS. In addition, two technical assistance missions were carried out by the IMF in 2006 and 2007 (derivation of the basket of goods and services and improvement of statistical techniques used in the current CPI).

0.4.2 Processes are in place to monitor quality during the planning and implementation of the statistical program.

The processes associated with the systematic monitoring of the quality of the data have improved since the 2006 ROSC Data Module mission. The monitoring of the quality is carried out on a monthly basis at the various data processing stages. The data processing system produces reports on missing prices, abnormal price variations, and imputed prices, which are used to identify and improve data quality issues. Section chiefs take part of this monthly effort.

This area has benefitted from technical assistance from the IMF provided in 2006 and 2007.

1. Assurances of integrity

1.1 Institutional Integrity

1.1.1 Statistics are produced on an impartial basis.

The compilation of price statistics is done on the basis of strictly technical criteria. The DMI is independent to choose its sources of information and statistical techniques.

Professionalism and technical independence are stimulated by the CBP. The CPI coordinators have taken specialized courses in price indicators, statistical techniques, sampling, and predictive models, offered by international organizations such as Eurostat, Spain's Statistical Office (INE), Economic Commission for Latin America and the Caribbean (CEPAL) and others.

1.1.2 Choice of data sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.

Data sources, methodologies, and statistical procedures used in the compilation of the CPI are based on statistical considerations only.

The timing for the release of CPI results is not influenced by non-statistical criteria.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.

The CBP follows the media coverage of its price statistics. CPI monthly press conferences are used to present explanations about the behavior of inflation figures and to prevent misinterpretation of results.

The DCNMI is empowered to comment on possible misinterpretation of statistics through the Office of the President of the CBP.

1.2 Transparency

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.

The Law No. 489/95, the monthly press releases, the methodology of the index, and an advance release calendar are publicly available on the CBP website.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified.

There is no governmental access prior to the release of CPI figures. This information is provided to all users at the same time.

1.2.3 Products of statistical agencies/units are clearly identified as such.

Both monthly inflation and economic reports bear the name and the CBP's logo. Price collection forms and other documents (for example, letters directed to possible new respondents) used in the prices and household expenditure surveys are also clearly identified by the CBP logo.

CPI data available from the internet have an identification of its origin (for example, <https://www.bcp.gov.py/userfiles/files/CARTI-IPC-ENERO-2014.xls>).

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.

The start of the divulgation of the current CPI (base 100 = December 2007) was preceded by a press conference explaining the major changes and methodological improvements.

1.3 Ethical standards

1.3.1 Guidelines for staff behavior are in place and are well known to the staff.

Ethical and conduct rules of CBP's personnel are defined in Resolution No. 20 of July 2008 (*Code of Ethics*). This code establishes a set of norms guiding the conduct of CBP staff that are based on the ethical values of excellence, trust, integrity, responsibility, transparency, compromise, service, team work, institutional respect, and professionalism. The responsibility of keeping the information confidential is one of the duties imposed on CBP staff and in any case shall it be used for own benefit (Article 18). Potential conflicts of interest are identified in chapter VIII of the *Code of Ethics*.

The *Code of Ethics* is made available to every employee of the CBP. The duty of confidentiality and responsibility are highlighted in supervision and price collection manuals.

2. Methodological soundness

2.1 Concepts and definitions

2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.

The concepts and definitions used in the CPI (base 100 = December 2007) are based on the *SNA 1993* and are in line with the *Consumer Price Index Manual 2004*.

The weighting concept for the CPI follows the *1993 SNA* and refers to consumption expenditures on goods and services purchased by households and were estimated using information from the 2005–2006 HBS, carried out in the Greater Asunción Area.

Expenditure estimates are categorized according to the Classification of Individual Consumption by Purpose (COICOP) and are available at the group, class, sub-class, and product levels. The CPI comprises of a total basket of 450 product items. The level of detail is of sufficient detail to allow for an analysis of the causes of inflation in any given month.

2.2 Scope

2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.

CPI weights include own-account production of market goods and services and goods received as salary in kind. The coverage of household consumption expenditures is not extended to the services (for example, shelter comfort) that own-occupiers obtain from their own dwellings/homes. The value of imputed rentals was included in the weights of the CPI (base 100 = 1980). The CPI (base 100 = 1992) and CPI (base 100 = December 2007) have not included imputed rentals in CPI weights.

The CPI measures the change in prices of a basket of 450 products representative of the final consumption expenditures of the urban households of the Greater Asunción Area (i.e., Asunción, Luque, Fernando de la Mora, Lambaré, San Lorenzo, and Capitá, representing 43.3 percent of the total urban population of the country). An index of a wider geographical coverage (representing 73.4 percent of the urban population) was suspended in 2001 due to budgetary reasons and to the fact that the CPI for the Greater Asunción Area displayed a similar price behavior as its national counterpart. Considering that this finding has more than ten years, it would be desirable to reinvestigate the issue and compare the behavior of prices of prices in a sample of selected cities not presently covered by the index (for example, Ciudad del Este).

Recommendations:

- Conduct a study in order to investigate whether the inclusion of prices collected in areas not currently covered by the CPI will impact significantly on official inflation rates.
- Include the owner-occupied housing component in CPI weights in the next update of the price index (rental equivalent approach).

2.3 Classification/sectorization

2.3.1 Classification and sectorization systems are broadly consistent with internationally accepted standards, guidelines, or good practices.

The classification and sectorization systems used in the CPI are in conformity with international rules. The classification of institutional units (for example, households) and transactions are based on the SNA 1993. The COICOP is used since the last (2007) update of the CPI basket.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The prices used in the CPI correspond to market prices paid by households and include all the taxes levied on purchased goods and services.

The specification of the goods and services included in the CPI basket are based on good practices and include product and transaction price determining characteristics (for example, dimension and country of origin).

Following international practices, prices of products with defects and discriminatory price reductions (i.e., not generally available to all consumers) are not included in the monthly price survey.

2.4.2 Recording is done on an accrual basis.

In general, the timing rules for recording prices and expenditures are broadly in accordance with *SNA 1993* rules. As such, consumption expenditures are recorded in the period they are purchased. The same rule is applied for the data generated by the monthly prices survey. Prices for perishable (fruits and vegetables) goods are recorded on a weekly basis.

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines and good practices.

In general, the gross/netting procedures applied in the derivation of CPI (base 100 = 2007) weights are broadly in accordance with accepted practices. The derivation of the weight of insurance in the CPI basket is derived using information provided by the national insurance authority and only takes into account the difference between gross premiums and claims paid. Similarly, the CPI weight of vehicles traded in secondary markets is obtained by subtracting household sales of vehicles from the value of household purchases household purchases of vehicle.

3. Accuracy and Reliability

3.1 Source data

3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.

Prices data are generated by a monthly prices survey. Around 16,500 price quotes in more than 1,200 outlets are collected every month for the estimation of average prices and elementary aggregates of the 450 products that are covered by the CPI basket (359 goods and 91 services). There are no other sources for prices information (for example, administrative files or internet price collection).

The sample of prices and outlets used in the CPI (base 100 = December 2007) represents a quantitative increase in relation to the 1992 base CPI, which was based on 5,000 prices collected in around 600 outlets (293 products). Overall, the number of collected price quotes and the prices survey are sufficient to support the compilation of the CPI.

Price collectors and supervisors are responsible not only for the collection of prices and characteristics information, but also for the replacement of outlets and products/varieties and, in this way, for keeping the data sources representative of consumption patterns.

The HBS, which is the source for the CPI weights, is conducted on an irregular basis. Prior to the 2005–2006 survey, the last two HBS were conducted in 1990–1991 and 1979. There are no plans or scheduled dates for a next survey. To more fully reflect international standards and best practices, CPI weights should be updated at least every five years.

The sample of households of the HBS 2005–2006 was drawn using the 2002 population census data as the basic sampling frame and using stratified probabilistic sampling techniques. The final size of the HBS sample comprised of 1,240 households distributed by the Greater Asunción Area.

The geographic coverage of the weights and prices data sources is not comprehensive as the CPI is restricted to the Greater Asunción Area, which has always been the inflation reference indicator for Paraguay. An index with a wider geographical scope was compiled until 2001. However, the production of this indicator was stopped due to budgetary reasons and to the fact that inflation rates and trends were very similar when compared with the Greater Asunción Area CPI. Given the fact that this is a finding with more than 10 years, it would be appropriate to conduct a study in areas not covered by the current index and investigate if price variations are similar to the ones displayed by the current CPI.

The prices data are collected with sufficient detail and include main price determining characteristics (for example, size, brand name, origin of the product) and ensure that period to period price comparisons refer to the same variety in the same type of outlet. When relevant, press news on the variation of prices of particular products are used as an external validation mechanism of collected information.

Recommendations:

- Conduct a new HBS to update CPI weights.
- Work towards internationally recommended best practices and conduct a regular HBS every five years.

3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required.

The price collection survey is conducted throughout the reference month on a monthly, biweekly, and weekly basis. Collected prices information is consistent with the time of recording and valuation principles underlying CPI compilation. CPI expenditure weights were estimated using information taken from the 2005–2006 HBS that was organized according to the COICOP classification system.

3.1.3 Source data are timely.

The collection, insertion, and validation of prices data are carried out throughout the first three weeks of the reference month, thus giving sufficient time for final data checks and the dissemination of CPI results until the third day following the end of the reference month of the index. Prices collection teams and resources (for example, cars used to support price collection) are managed

according to a predetermined calendar that was defined to guarantee the production of final statistical output in time for divulgation purposes.

3.2 Assessment of source data

3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.

Information about the way the 2005-2006 HBS was conducted can be obtained from annex 4 of the CPI methodology (https://www.bcp.gov.py/userfiles/files/Metod_IPCBase122007.pdf). This annex includes a description of the stages of the survey and provides information on nonresponse rates. However, the sampling errors associated with the estimation of household consumption expenditures are not available.

The design of the sample of the present CPI (base 100 = December 2007) included, for the first time, the use of a procedure for the optimization of the sample size for some products (the optimization study took into account the prices/micro-data that were recorded over an eight-month period). It would be desirable to extend this good practice to other product areas of the basket and conduct a study using the information collected over a longer time period. The result of this study could be used as an input for the next CPI revision and to the optimization of samples sizes.

The CPI data processing system produces reports with the number of missing price observations by cause (for example, definitive, temporary, seasonal or change of quality). The system is ready to produce reports by outlet and /or by product. A system of filters, which can be chosen (for example, +- 10 percent), helps identifying outlying price changes that will subject to analysis by the CPI team.

There are no routines or procedures implemented involving checking back a sample of data at its source. The CPI does not employ administrative data sources in its compilation process.

Recommendation:

- Conduct a study to better inform on how to optimize CPI sample sizes in the next CPI basket update.

3.3 Statistical techniques

3.3.1 Data compilation employs sound statistical techniques to deal with data sources.

The data used in CPI production is collected by direct observation by field staff. The collection of prices is carried out throughout the reference month simultaneously with data entry and first validation procedures. Supervisors and division chiefs use statistical filters available in the compilation software system to detect coding, editing, and tabulation errors.

The 2007 base CPI employs sounder statistical methods than its 1992 base CPI predecessor. In particular, the following improvements were achieved: (i) use of suitable and improved methods for the imputation of missing prices in the index (which were previously eliminated from CPI calculation); (ii) treatment of missing prices due to seasonal reasons using a fixed-weight, imputed prices approach; and (iii) better use of implicit quality adjustment techniques and abandon the intrinsically biased link-to-show-no-change method.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.

Household consumption expenditures are defined in accordance with the *SNA 1993*. The CPI does not include consumption weights for owner-occupied housing expenditures. The own consumption of goods and services, and other nonmonetary expenditures covered by CPI weights are valued at market prices at the time produced.

The calculation of elementary aggregates is done using the geometric mean of price relatives, which is the preferred measure for the aggregation of unweighted prices information. This represents a change in relation to the base 1992 CPI, which applied the ratio of arithmetic mean prices (i.e., the Dutot formula).

The CPI is a fixed-quantity index with the weights' reference period (i.e., 2005-2006) preceding the prices' reference period (i.e., December 2007). Following internationally accepted rules, CPI the weights' reference period was price updated to align with the price reference period.

The weights' reference period of the present CPI reflects 2005-2006 consumption patterns, which may not be representative of the present consumption structure of the Greater Asunción Area. The 7-8 years time lag underlying current CPI weights exceeds internationally recommended good practices for CPI compilation purposes. There are no plans for a new HBS.

The 1992 base CPI was linked to the December 2007 base CPI using internationally accepted techniques. A CPI series starting in December 1994 is available on the CBP website.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable.

The CPI is regularly confronted with PPI comparable indexes at the product level. In addition, press information on prices and its evolution is also used to validate the evolution of elementary aggregate index results. Prices collected by the Directorate-General of Consumer Protection of the Ministry of Industry and Commerce are also subject of analysis and are used to validate CPI results.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Unusual movements of price variations are routinely investigated by supervisors and section chiefs of the CPI/PPI team. Data checks include the comparison of average prices, the analysis of price

changes from two successive periods, the identification of outlying prices (using thresholds/filters for monthly price variations), and listening price collectors' explanations on collected prices and characteristics.

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.

Discrepancies arising from erroneous imputation of missing data and other type of inconsistencies are assessed during the compilation process of the CPI and through reports and data screening tools available in the CPI compilation software environment. Detected inconsistencies are tackled using appropriate data adjustments.

3.5 Revision studies

3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).

An investigation of the substitution bias associated with the last base change was carried out for internal purposes. However, no studies are conducted on the long term-trends in the revision patterns to identify if some of the revisions reveal any systematic bias in the updates. Likewise, other possible sources of bias (for example, outlet substitution bias) are also not investigated.

Recommendation:

- Carry out a study on the possible substitution bias in the next CPI basket update and compare it with the revision study that has been carried out in the last basket update.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The CPI is compiled on a monthly basis and meets GDDS recommendations.

4.1.2 Timeliness follows dissemination standards.

CPI monthly estimates are released up to three days after the end of reference month. The CPI meets the GDDS, which recommends the dissemination of monthly estimates within two months after the end of the reference month.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

CPI results are consistent in the sense that the results provided by the all-items CPI aggregate are invariant to the typology of aggregation that is used.

4.2.2 *Statistics are consistent or reconcilable over a reasonable period of time.*

Consistent CPI time series exist since December 1994. The series is available for the overall index and for two-digit COICOP groups. Longer time series can be obtained from the DMI upon request.

The identification of the major breaks in CPI series is available in the CPI methodology, which is available on the CBP website. The methodology used in the production of the December 1994 time series is described in the CPI methodology.

4.2.3 *Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.*

The behavior of the CPI is consistent with the implicit consumption deflator used in national accounts. Inconsistencies arising from the comparison of the CPI and PPI are analyzed and investigated.

4.3 Revision policy and practice

4.3.1 *Revisions and/or updates follow a regular and transparent schedule.*

The monthly inflation figures provided by the CPI are generally not revised. The weights and CPI basket are updated when new HBS survey information exists.

Major revisions represent opportunities to renew the indicator and to introduce methodological improvements. As such, a policy for establishing a more regular update schedule should be defined and applied in future revisions. This policy should consider the possibility of using information from other sources (for example, information from the national accounts) and involve the expertise from other institutions (for example, DGEEC) to reduce the cost of conducting future HBSs.

Recommendation:

- Define a revision policy for the update of CPI weights and basket of products. Work towards the establishment of a system that could feed the renewal of the CPI at regular intervals, in line with international recommendations and best practices.

4.3.2 *Preliminary and/or revised/updated data are clearly identified.*

CPI data are generally not subject to revisions once they have been produced. Although there is no explicit statement on this issue, users are aware of this rule.

4.3.3 *Studies and analyses of revisions and/or updates are made public (see also 3.5.1).*

Major CPI weights and basket revisions are not measured, assessed and compared to previous CPI series in statistical publications (for example, monthly inflation reports). Inflation figures are not revised after being produced.

5. Accessibility

5.1 Data accessibility

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).

Overall, CPI data are presented in a suitable way in publications (for example, with charts and tables) and allows users to interpret available information in a clear way.

5.1.2 Dissemination media and format are adequate.

The CPI is disseminated every month in a monthly inflation report (*Informe de Inflación*), which is available online. The presentation of CPI monthly figures is given at a press conference at the CBP (the materials used in this press conference – power point presentation and note to the press- are also available online).

5.1.3 Statistics are released on a preannounced schedule.

The dissemination dates of the CPI are available in an advance release schedule, which is defined for each year and is available on the CBP website.

5.1.4 Statistics are made available to all users at the same time.

The release of CPI data is done for all users at the same time through a press conference at the CBP.

5.1.5 Statistics not routinely disseminated are made available upon request.

In addition to the information normally provided, users can have access to additional statistics or information upon request. Specific information requests are also satisfied upon request.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

CPI methodology is available online on the CBP website. At the time of the mission, the GDDS metadata posted on the IMF's Dissemination Standards Bulletin Board (DSBB) had not been updated since 2004.¹²

Recommendation:

- Update and maintain current the CPI metadata available in national publications as well as the GDDS metadata posted on the IMF website.

¹² Revised CPI metadata were posted on the IMF's DSBB in March 2014.

5.2.2 Levels of detail are adapted to the needs of the intended audience.

Statistics are disseminated in formats that suit users' needs (for example, through the CBP website and paper publications).

5.3 Assistance to users**5.3.1 Contact points are publicized.**

Assess contact points, which could be used for the CPI, are not available in CPI publications or CPI data presentations. The time spent on assisting users and in satisfying its information needs is never monitored and reviewed.

Recommendation:

- Include and advertise on the CBP website and in CPI publications a contact point specific for this indicator.

5.3.2 Publications, documents, and other services, including information on any charges, are widely available.

CPI publications are widely available to users through the CBP website. Publications, documents, and other information not available online are available from the CBP upon request.

Table 2. Data Quality Assessment Framework (May 2012): Summary of Results for Consumer Price Index*(Compiling Agency: Central Bank of Paraguay)*

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; GDDS = Complies with GDDS Criteria							
Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
0. Prerequisites of quality							
0.1 Legal and institutional environment		X					
0.2 Resources			X			Although able to maintain the regular production of the three indicators, current staff number is not adequate for improvement work and data collection activities.	Move from paper price collection forms to tablet PCs.
0.3 Relevance		X					
0.4 Other quality management		X					
1. Assurances of integrity							
1.1 Institutional integrity		X					
1.2 Transparency		X					
1.3 Ethical standards		X					
2. Methodological soundness							
2.1 Concepts and definitions		X					
2.2 Scope			X			A national CPI was stopped in 2001 partly due to the fact that inflation rates were very similar when compared with the Greater Asunción Area. A reassessment of this finding should be made.	
2.3 Classification/sectorization		X					
2.4 Basis for recording		X					
3. Accuracy and reliability							
3.1 Source data			X			The last HBS was carried out in 2005-2006 and may not reflect present consumption patterns.	Conduct a new HBS to update CPI weights.
3.2 Assessment of source data			X			Sampling techniques are not widely used to optimize sample sizes.	
3.3 Statistical techniques		X					
3.4 Assessment and validation of intermediate data and statistical outputs		X					

Table 2. Data Quality Assessment Framework (May 2012): Summary of Results for Consumer Price Index (concluded)

(Compiling Agency: Central Bank of Paraguay)

3.5	Revision studies		X			There is no systematic and regular evaluation of bias in the CPI.	
4. Serviceability							
4.1	Periodicity and timeliness		X				
4.2	Consistency		X				
4.3	Revision policy and practice			X		CPI weight and basket updates are not carried out at regular intervals and with a maximum lag of five years, as recommended by international guidelines.	
5. Accessibility							
5.1	Data accessibility		X				
5.2	Metadata accessibility			X		GDDS metadata had not been update since 2004. Revised CPI metadata were posted on the IMF's DSBB in March 2014	
5.3	Assistance to users			X		There are no specific contact points for the CPI.	

PRICE STATISTICS (PRODUCER PRICE INDEX)

0. Prerequisites of quality

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.

The Producer Price Index (PPI) of Paraguay is produced and disseminated by the National Accounts and Domestic Market Department (DCNMI) of the Office of the General Deputy Manager for Monetary Policy (SGGPM) of the Central Bank of Paraguay (CBP). In 2013, a new organizational structure was adopted by the CBP. However, in the case of the DCNMI, this new structure has not yet been implemented and the production of price statistics is carried out using the former organizational structure. The responsibility for the compilation and publication of price indicators for the domestic market is clearly attributed to the CBP in Article 82 of Law No. 489/95, which defines the fundamental rules and principles governing the CBP.

Despite the existence of Decree-law No. 11.126 of February 1942, which assigns to the Directorate-General of Statistics and Census (DGEEC) the role of compiling consumer and other price statistics, the production and dissemination of the PPI has in practice always been carried out by the CBP.

0.1.2 Data sharing and coordination among data-producing agencies are adequate.

The sampling frame used for the selection of the sample of goods and the estimation of PPI weights is derived from a number of administrative data records, censuses, and directories prepared by other public or private entities, such as: (i) the Paraguayan Industrial Union; (ii) the Under Secretariat of Taxation of the Ministry of Finance (MOF); (iii) the Directorate-General of Customs; (iv) the Under Secretariat of Mines and Energy of the Ministry of Public Works; (v) the Ministry of Agriculture and Livestock; (vi) the DGEEC; and (vii) the National Accounts Division of the CBP.

Most of the prices information of agricultural goods is provided by the Directorate of Marketing and Agricultural Economy of the Ministry of Agriculture and Livestock and by the Directorate of Supply of the Municipality of Asunción.

In 2009, an inter-institutional technical group, which counted with the participation of the DCNMI, was created with the aim of designing and conducting the 2011 National Economic Census; the first to be conducted after 1965. The final results are available on http://www.dgeec.gov.py/Publicaciones/Biblioteca/CEN2011/resultados_finales_CEN.pdf and, provide relevant economic information for the change of the base year of the system of national accounts and for the PPI.

0.1.3 Individual reporters' data are kept confidential and used for statistical purposes only.

The preservation of confidentiality of respondents' provided data is guaranteed under Article 80 of Law No. 489/95. In addition, Article 82 of this Law stipulates that statistics must be published in an aggregated form and omitting any individual reference.

CBP staff that, by virtue of their duties, have access to confidential and privileged information are obliged to exercise full data discretion and comply with statistical secrecy requirements. Infractions to this rule fall under the disciplinary system of the CBP and staff are subject to sanctions and penalties (Article 88 of Law No. 861/96; the General Law on Banks, Financial Companies, and Other Credit Institutions).

0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.

According to Article 80 of Law No. 489/95, public institutions, banks, companies, and other entities involved in financial intermediation, as well as private sector enterprises, shall have the duty of collaboration with the CBP and shall provide the data and information needed for the fulfillment of its functions.

Respondents' misreporting and nonresponses are not subject to any penalties or sanctions. The CBP seeks to promote cooperation and goodwill by explaining the purpose of the survey in official letters or, if needed, by contacting directly the establishments and managers of enterprises falling into the sample of respondents.

0.2 Resources

0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.

The Domestic Market Division (DMI) of the DCNMI comprises of a team of 23 staff members working in the production of price statistics (one division chief, three section chiefs, nine supervisors, and ten price collectors).

The team is responsible not only for the monthly compilation of the PPI but also for the monthly Consumer Price Index (CPI) and a half-yearly wage index. In addition, PPI staff participates in other projects (for example, the 2011 round of the International Comparisons Program (ICP) of the World Bank).

As of March 2013, a new field work organization was implemented in response to a decrease in the number of human resources attached to the DMI, which was essentially caused by the retirement of experienced staff. As a result of this reorganization, the number of price collection teams has been reduced from nine to eight. In order to cope with the volume of processed information, supervisors are engaged in both supervision and price collection activities and the three teams specialized in PPI price collection tasks have been merged with CPI units and participate in the collection of information for all indicators covered by the DMI.

Although able to maintain the regular production of the three indicators, the current staff number is not adequate for improvement work and data collection activities.

The qualifications of the present team are adequate. The division and sections chiefs of the DMI have university degrees and training in the field of economics and statistics. Price collectors must hold a bachelor's degree with introductory courses in economics. Supervisors have a minimum of three years of experience in price collection activities.

The average length of service for the division and sections chiefs exceeds ten years. In the case of supervisors and price collectors, the average length in service is three to four years as a result of staff turnover to other units of the CBP.

Contrary to the CPI, DMI staff have not benefitted from participations in international courses, seminars, and workshops on PPI methodology.

The promotion system in place in the CBP is based on automatic increases in the job category scale after a certain number of years. The remuneration of the staff is competitive by comparison with other public sector employees.

Computer and software resources available for PPI production significantly improved since the 2006 ROSC Data Module mission and are adequate to perform required tasks. A computer is assigned to each staff member, and a total of five printers are available in the division producing the PPI.

The database and data processing system supporting both the PPI and CPI represent an upgrade in relation to the previous data processing structure. It has the following features: (i) manages the inclusion and exclusion of varieties; (ii) generates price validation reports; (iii) includes a routine for the imputation of missing prices; and (iv) provides monthly reports with information on the prices survey coverage of outlets and observed prices, as well as about the proportion of imputed prices and its cause. The DMI is planning to move from paper price collection forms to tablet PCs. A Windows Mobile application is being migrated to Android and will allow the collection of CPI and PPI data on PDAs (the migration is expected to be finished by mid-2014).

The premises and office equipment assigned to the personnel that compile and disseminated the PPI are appropriate. The number of vehicles assigned for price collection is ten. The vehicle fleet is new (one year old) and is considered appropriate for the support of price collection activities.

The budgeting practices are adequate to perform the tasks associated with the regular production of the PPI.

Recommendations:

- Hire additional price collectors and ensure that the DMI maintains an adequate staff number for price collection activities and for the formation of price collection teams specialized in the PPI indicator.
- Improve the capacity of the DMI staff in PPI methodology and ensure that it benefits from training and external technical assistance on this indicator.

0.2.2 Measures to ensure efficient use of resources are implemented.

Monthly field work is planned subject to resource availability and a specific schedule of visits, which takes into account factors such as the number of visits and travel distances required for each data collection area. A comparable process is used for assigning vehicles.

Prices are entered into the data processing system throughout the month, so as to prevent the accumulation of work and paper forms. This ensures that the workload for prices can be handled in keeping with the schedule for processing and presenting results.

As part of the appraisal process, the Office of the Manager for Institutional Development maintains a systematic record of staff arrivals and departures and the number of hours worked by each staff.

The finance department of the CBP monitors the execution of the budget resources attached to the PPI.

0.3 Relevance

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.

Although a periodic and formal process of consultation on the utility of the statistic has not been established, new users' demands are identified and satisfied. For instance, recently a new price index series on cement prices was produced to respond to the needs of the construction economic sector (<https://www.bcp.gov.py/userfiles/files/CARTILLA-CEMENTO.pdf>).

The DMI presents the results of the PPI (together with CPI results) on a monthly basis in a press conference where the media is invited to pose questions about the results. Specific concerns and/or users needs are passed forward by the CBP press unit and subsequently addressed by the DMI.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

Contrary to the CPI, the PPI has not received any expert advice. The current index series (base 100 = June 2011) has replaced the previous series (base 100 = December 1995). The methodology is available on the CBP website. Training on PPI methodology was essentially provided by internal experts.

0.4.2 Processes are in place to monitor quality during the planning and implementation of the statistical program.

The processes associated with the systematic monitoring of the quality of the data have improved since the 2006 ROSC Data Module mission. The monitoring of the quality is carried out on a monthly basis and at the various data processing stages. The data processing system produces reports on missing prices, abnormal price variations and imputed prices, which are used to identify and improve data quality issues. Section chiefs take part of this monthly effort.

1. Assurances of integrity

1.1 Institutional Integrity

1.1.1. Statistics are produced on an impartial basis.

The compilation of price statistics is done on the basis of strictly technical criteria. The DMI is independent to choose its sources of information and statistical techniques.

Professionalism and technical independence are stimulated by the CBP. The coordinators of price statistics have taken specialized courses in price indicators, statistical techniques, sampling, and predictive models, offered by international organizations such as Eurostat, Spain's Statistical Office (INE), Economic Commission for Latin America (CEPAL), and others.

1.1.2 Choice of data sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations.

Data sources, methodologies, and statistical procedures used in the compilation of the PPI are based on statistical considerations only.

The timing for the release of PPI results is not influenced by non-statistical or technical criteria.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.

The CBP follows the media coverage of its price statistics. The monthly PPI (and CPI) presentations to the press are used to clarify doubts and prevent an eventual misuse of produced statistics.

The DCNMI is empowered to comment on possible misinterpretation of statistics through the Office of the President of the CBP.

1.2 Transparency

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.

The Law No. 489/95, the monthly press releases, the methodology of the index, and an advance release calendar are publicly available on the CBP website.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified.

There is no governmental access prior to the release of PPI figures.

1.2.3 Products of statistical agencies/units are clearly identified as such.

Publications/reports bear the name and CBP's logo. Price collection forms and other documents (for example, letters directed to possible new respondents) used in the prices surveys are also clearly identified by the logo of the CBP.

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.

The start of the divulgation of the PPI (100 = June 2011) series was preceded by a press conference explaining the major changes and methodological improvements.

1.3 Ethical standards

1.3.1 Guidelines for staff behavior are in place and are well known to the staff.

Ethical and conduct rules of CBP personnel are defined by Resolution No. 20 of July 2008 (*Code of Ethics*). This code establishes a set of norms guiding the conduct of every employee of the CBP that are based on the ethical values of excellence, trust, integrity, responsibility, transparency, compromise, service, team work, institutional respect, and professionalism. The responsibility of keeping the information confidential is one of the responsibilities of CBP staff and in any case shall it be used for own benefit (Article 18). Potential conflicts of interest are identified in chapter VIII of the code.

The *Code of Ethics* is made available to every employee of the CBP. The duty of confidentiality and responsibility are highlighted in supervision and price collection manuals.

2. Methodological soundness

2.1 Concepts and definitions

2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.

The PPI is defined as comprising the following sub-indices: (i) a price index for nationally produced goods, and (ii) a price index for imported goods available on the domestic market. The latter index represents 45.2 percent of the June 2011 PPI basket.

The inclusion of import prices in the PPI is not in line with what is internationally accepted as a conceptual standard for this indicator. Following the *Producer Price Index Manual 2004*, the PPI should reflect the total value of domestic output (including those goods destined for export). Import price indices should not be included in the composition of the PPI as they do not represent domestic production. The definition used by the actual PPI, is more in accordance with that of a Wholesale Price Index (WPI), a term which coined the first two index number series ever produced by the CBP in this area (i.e., WPI bases 1938 and 1972; the concept of using domestic production and import prices in the same index comes at least from the 1972 series).

PPI base weights are derived from supply and use tables provided by the national accounts (the information refers to 1994 base year).

The PPI is structured to produce estimates by product only. As such, no industrial breakdown is provided for PPI output estimates. The estimates are aggregated around the following product categories: (i) agricultural goods; (ii) livestock goods; (iii) forestry and logging products; (iv) fishing

products; (v) minerals; (vi) food, beverages and tobacco, textiles, wearing apparel and leather goods; (vii) nonmetallic transportable goods; and (viii) metal products, machinery and equipment.

The products are disaggregated in line with the five-digit Central Product Classification (CPC) structure. At the product level (7-digit level), a national classification is used.

Recommendation:

- Remove import prices from the conceptual framework of the production prices indicator, as they do not represent domestic production.

2.2 Scope

2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.

The PPI for domestically produced goods covers the output produced by resident enterprises in the agriculture, forestry, fishery, mining, and manufacturing activities, which corresponds to sections A, B, C, and D of the International Standard Industrial Classification of All Economic Activities (ISIC) Rev.3 taxonomy.

In order to achieve a better coverage of the domestic production, it would be desirable to progressively expand the coverage of the PPI to sections E (for example, electricity and water supply) and F (construction activities). Exports and services are also not covered and should be the object of future coverage improvements of the index. The percentage of gross domestic output of the sectors covered by the PPI is estimated to be of around 36 percent.

Prior to the introduction of the June 2011 PPI, the DMI had plans to develop, in addition to the PPIs covering national output and imports, an export price index to be included as part of a broader system of producer price indices. The project was, however, not completed due to resource constraints.

The index does not cover own-account production of goods (for example, production for own use of residential or nonresidential facilities).

Recommendations:

- Expand gradually the scope of the PPI to include, at first, electricity and water supply and exports. At a second stage, continue expanding the coverage to include construction and services.
- Plan the development of the PPI as part of a broader system of producer and wholesale price indices where, in addition to the present PPI (which currently includes import prices), other indices, such as for exports, could be included.

2.3 Classification/sectorization

2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.

The classification systems applied in PPI production are broadly in accordance with international standards. Institutional units and transactions are defined in accordance with the 1993 SNA.

Economic activities and products are classified using national classifications that are consistent and in accordance with the ISIC Rev.3 and the CPC, respectively.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The valuation principles used in the PPI are broadly in line with the 1993 SNA guidelines.

The PPI is an output price index, where market output is valued at producers' prices. Collected prices exclude value-added tax and represent what producers receive for produced output sold on the domestic market.

The value of imports, which is conceptually outside the scope of a producer price index, is expressed in c.i.f. prices and includes import duties.

2.4.2 Recording is done on an accrual basis.

The timing rules used for recording weights and prices in the PPI are in line with the 1993 SNA. Output production and output prices of goods are recorded at the moment of transaction.

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.

Transactions between establishments within the same enterprise are recorded on a gross basis. This is consistent with grossing/netting internationally accepted procedures used for the construction of output price indices.

3. Accuracy and Reliability

3.1 Source data

3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.

Given that there is no regular survey program covering the production of national output, the weight structure of the PPI was drawn using supply and use tables information, supplemented by various administrative records taken from the following private and public institutions such as the Ministry of Agriculture and Livestock, the MOF, and Industrial Unions/Associations. The information used in the compilation of the PPI weights and basket is referenced to year 2010.

The supply and use tables applied in the derivation of PPI weights provided information for a total of 268 goods and services. As services were ruled out from the initial scope of the index, the target population of the PPI was confined to 236 produced goods. The final PPI sample includes 185 products, which were chosen using a cut-off sampling approach and represent around 80 percent of the production value of covered economic activities. This represents an improvement in relation to the previous PPI (December 1995 = 100) series, which had a basket of 125 products. However, as it was also noted in the 2006 ROSC Data Module, the coverage of economic activity is not complete and it would be desirable to have statistics for services (estimated to weight 42.9 percent of gross domestic output) and other sectors (for example, construction, which is estimated to weight 3.6 percent of gross domestic output).

Although the weights and the basket of goods of the present PPI have been updated in 2011, it would be desirable to start planning the next PPI revision. This revision should take into account new information collected from other institutions (for example, economic census data) and the next base year change in national accounts.

Prices data are essentially generated by the prices survey that is conducted monthly by price collectors and supervisors. The PPI is based on a sample of around 2,500 prices for 185 produced products.

The PPI has a national coverage. Price collectors and supervisors are responsible for the collection of prices and characteristics information and for the replacement of products and products/varieties.

The prices data are collected with sufficient detail and include main price determining characteristics (for example, size, brand name, origin of the product) and ensure that period to period price comparisons refer to the same product variety.

The PPI information available for PPI compilation is sufficiently detailed to estimate the evolution of the PPI at the 2-digit level of ISIC Rev.3 and at the 4-digit level of the CPC. Prices received by producers for their exports should also be included in future PPI updates.

Recommendations:

- Start planning the next PPI revision/update.
- Combine the information of the last 2011 National Economic Census with other sources of information to regularly update the directory of establishments/reporting units.

3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required.

The price collection survey is conducted on a monthly basis. Collected prices information is consistent with the time of recording and valuation principles underlying PPI compilation.

3.1.3 Source data are timely.

The collection, insertion, and validation of prices information are carried out during eight days of the second and fourth weeks of the reference month for the Greater Asunción Area, and during the second, third, and fourth weeks of the reference month for the central, east, and south zones of the

country. The prices of agricultural goods provided by the Ministry of Agriculture are received up to two weeks after the end of the reference month. Prices collection teams and resources (for example, cars used to support price collection) are managed according to a predetermined calendar that was defined to guarantee the production of final statistical output in time for divulgation purposes.

3.2 Assessment of source data

3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.

There is no information available to users on sampling and non-sampling errors associated with the estimation of weights and the prices survey. The sample sizes of the prices survey have not been assessed and optimized (for example, using information about the variability to past prices).

The PPI processing system produces reports with the number of missing price observations by cause (for example, definitive, temporary or change of quality). The system is ready to produce reports by outlet and /or product. A system of filters, which can be chosen (for example, +- 10 percent), helps identifying outlying price changes that will subject to analysis by the PPI team. There are routines implemented involving checking price information at its source.

Recommendation:

- Assess prices source data using sampling techniques (for example, optimize sample size using prices information collected in the past).

3.3 Statistical techniques

3.3.1 Data compilation employs sound statistical techniques to deal with data sources.

The data used in PPI production is collected by direct observation by field staff and using administrative records with prices information (for example, on agricultural products' average prices). The collection of prices is carried out throughout the reference month simultaneously with data entry and first validation procedures. Supervisors and division chiefs use statistical filters available in the compilation software system to detect coding, editing, and tabulation errors.

The PPI does not cover electricity, water, gas, construction, and services. In order to achieve a full coverage of domestic production, exports should be included.

The PPI (base 100 = June 2011) has benefitted from the introduction of sounder statistical methods in the December 2007 CPI. In particular, the following improvements were achieved: (i) imputation of missing prices using internationally accepted methods (missing prices were previously eliminated from PPI calculation); and (ii) use of implicit methods and abandon of the intrinsically biased link-to-show-no-change technique as a method to deal with quality change.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.

Gross output is generally consistent with the 1993 SNA. Work in progress, inventory valuation adjustment, and the production of services from owner-occupied dwellings are not taken in PPI weights.

The calculation of elementary aggregates and of higher-level aggregations is carried out in line with the PPI manual. Elementary aggregates are calculated using the geometric mean of price relatives, which is the preferred measure for the aggregation of unweighted prices information.

The PPI is a fixed-quantity index with the weights' reference period defined in 2010 preceding the prices' reference period (i.e., June 2011). Following internationally accepted rules, PPI the weights' reference period was price updated to align with the price reference period. The weights' reference period of the present PPI reflects 2010 economic structure.

A PPI series, starting in December 1994, is available on the CBP website. The series was developed using internationally accepted practices.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable.

The PPI is regularly confronted with CPI comparable indices at the product level.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

The data are regularly analyzed for inconsistency across the different products of the PPI basket. Data checks include the comparison of prices of goods of imported and national origin, the analysis of price changes from two successive periods and the examination of qualitative information provided by supervisors and price collectors about prices and its characteristics. The identification of outlying movements is routinely carried out using thresholds for monthly price variations. The analysis of the information is, in addition, validated against possible relevant press news on prices and its behavior.

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.

Discrepancies arising from erroneous imputation of missing data and other type of inconsistencies are assessed during the compilation process of the PPI and through reports and data screening tools available in the PPI compilation software environment. Detected inconsistencies are tackled using appropriate data adjustments.

3.5 Revision studies

3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).

The update of the PPI is not done at regular intervals. Prior to the 2011 exercise, the last two weight and basket revisions took place in 1995 and 1972. No studies are conducted to identify if revisions entail any systematic bias or to determine the effects of substitution and other source of errors/bias on the PPI.

Recommendation:

- Assess the size and magnitude of substitution and other sources of bias in the next PPI update exercise.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The PPI is compiled on a monthly basis and meets GDDS recommendations.

4.1.2 Timeliness follows dissemination standards.

The PPI is usually available between 8-11 days after the end of the reference period and disseminated to all users up to five weeks after the end of the reference month. As such, the PPI is in accordance with the GDDS, which recommends the dissemination of monthly estimates within two months after the end of the reference period.

Recommendation:

- Consider the possibility of producing a press release/note on the PPI shortly after being finished (i.e., 8-11 days after the end of the reference period). The press release would be posted on the CBP website, and dissemination dates included in the already existent advance release calendar.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

PPI results are invariant to changes in classification in the sense that the results provided by the all-items aggregate are invariant to the typology of aggregation that is used.

4.2.2 Statistics are consistent or reconcilable over a reasonable period of time.

Consistent PPI time series exist since December 1995. Longer time series can be obtained from the DMI upon request. As in the CPI case, the identification of the major breaks in PPI series is available in the PPI methodology, which is available on the CBP website.

4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.

The PPI is largely consistent with CPI results.

4.3 Revision policy and practice

4.3.1 Revisions and/or updates follow a regular and transparent schedule.

The monthly PPI figures are generally not revised. National accounts information provides the basis for the update of the PPI and a new revision is expected to be carried out following the next national accounts change of base year.

Major revisions represent opportunities to renew the indicator and to introduce methodological improvements. As such, a policy for establishing a more regular update schedule should be defined and applied in future revisions.

Recommendation:

- Define the next revision of the PPI and plan a program for the regular update of this indicator, as recommended by international best practices in this matter.

4.3.2 Preliminary and/or revised/updated data are clearly identified.

The PPI is not subject to revisions once it has been produced. Although there is no explicit statement on this issue, users are aware of this rule.

4.3.3 Studies and analyses of revisions and/or updates are made public (see also 3.5.1).

Major PPI weights revisions are not measured, assessed, and compared to previous PPI series in statistical publications (for example, monthly economic reports). PPI figures are not revised after being produced.

5. Accessibility

5.1 Data accessibility

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).

Overall, PPI data are presented in a suitable way (for example, with charts and tables) and allow users to interpret available information in a clear way.

5.1.2 Dissemination media and format are adequate.

The PPI is disseminated every month in a monthly economic report (*Informe Económico*), which is available online and includes a statistical annex with data. The presentation of the PPI is done at a press conference at the CBP (results are presented at the same time as CPI results).

5.1.3 Statistics are released on a preannounced schedule.

The PPI is disseminated together with the CPI. An advance release calendar, with release dates for the PPI, is available on the CBP website. The advance release calendar does not include a separate line for the PPI.

Recommendation:

- Improve the advance release calendar by including a separate line for the PPI. The information provided should mention the reference month of the indicator.¹³

5.1.4 Statistics are made available to all users at the same time.

The release of PPI figures is carried out for all users at the same time through a press conference at the CBP.

5.1.5 Statistics not routinely disseminated are made available upon request.

In addition to the information normally provided, users can have access to additional statistics or information upon request. Specific information requests are also satisfied upon request.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

PPI methodology is available online on the CBP website. At the time of the mission, the GDDS metadata posted on the IMF's Dissemination Standards Bulletin Board (DSBB) had not been updated since 2004.¹⁴

Recommendation:

- Update and maintain current the PPI metadata available in national publications as well as the GDDS metadata posted on the IMF website.

5.2.2 Levels of detail are adapted to the needs of the intended audience.

Statistics are disseminated in formats that suit users' needs (for example, through the CBP website and paper publications).

¹³ The recommendation has been already implemented and a new advance release calendar is available on the CBP website (https://www.bcp.gov.py/userfiles/files/Calendario_Publicaciones_2014_130314.pdf).

¹⁴ Revised PPI metadata were posted on the IMF's DSBB in March 2014.

5.3 Assistance to users

5.3.1 *Contact points are publicized.*

Statistical releases with PPI data (for example, *Informe Económico*) do not identify contact points for enquiries nor publicize email, telephone or any other contact mean for specific questions or requests on the indicator.

Recommendation:

- Include and advertise on the CBP website and in publications with PPI data a contact point specific for this indicator.

5.3.2 *Publications, documents, and other services, including information on any charges, are widely available.*

PPI publications are widely available to users through the CBP website. Other publications, documents, and other services with PPI information (for example, *Informe Económico*) are available from the CBP upon request.

Table 3. Data Quality Assessment Framework (May 2012): Summary of Results for Producer Price Index

(Compiling Agency: Central Bank of Paraguay)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; GDDS = Complies with GDDS Criteria							
Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
0. Prerequisites of quality							
0.1 Legal and institutional environment		X					
0.2 Resources			X			Price collection teams specialized in the PPI have been merged with CPI units due to the lack of human resources. The PPI team has not received training on PPI methodology.	Move from paper price collection forms to tablet PCs.
0.3 Relevance		X					
0.4 Other quality management		X					
1. Assurances of integrity							
1.1 Institutional integrity		X					
1.2 Transparency		X					
1.3 Ethical standards		X					
2. Methodological soundness							
2.1 Concepts and definitions				X		Contrary to what is internationally recommended, the prices of imports are included in the PPI. Imports should be excluded from the PPI.	
2.2 Scope				X		The coverage of the national output is not complete. The PPI should include exports as the index should represent the total value of domestic production. There were plans to include exports in a system of price indexes. The project was not completed due to the lack of resources.	Develop a system of price indexes (covering exports and with a more comprehensive coverage of output).
2.3 Classification/sectorization		X					
2.4 Basis for recording		X					
3. Accuracy and reliability							
3.1 Source data			X			PPI revisions/updates are not carried out on a regular basis. Samples are not refreshed with a periodicity that is recommended by international standards.	Have the directory of establishments regularly updated with information taken from administrative data sources.
3.2 Assessment of source data			X			PPI data sources are not assessed on a regular basis.	
3.3 Statistical techniques		X					

Table 3. Data Quality Assessment Framework (May 2012): Summary of Results for Producer Price Index (concluded)*(Compiling Agency: Central Bank of Paraguay)*

3.4	Assessment and validation of intermediate data and statistical outputs		X				
3.5	Revision studies			X			No studies are conducted to identify if revisions entail any systematic bias or on the PPI.
4. Serviceability							
4.1	Periodicity and timeliness		X				
4.2	Consistency		X				
4.3	Revision policy and practice			X			PPI weight and basket updates are not carried out at regular intervals and with time lags that exceed what is internationally recommended.
5. Accessibility							
5.1	Data accessibility		X				
5.2	Metadata accessibility			X			GDDS metadata had not been updated since 2004. Revised PPI metadata were posted on the IMF's DSBB in March 2014.
5.3	Assistance to users			X			There are no specific contact points for the PPI.

GOVERNMENT FINANCE STATISTICS

0. Prerequisites of Quality

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified

Fiscal statistics are compiled and disseminated by the Ministry of Finance (MOF), in accordance with the terms and conditions established in the following laws and regulations, and their amendments: (i) the Financial Administration of the State Law (Law No. 1535 of December 31, 1999) and its regulatory Decree (Decree No. 8127/00 of March 30, 2000); (ii) the Law that establishes the functions and organizational structure of the MOF (Law No. 109/92 of January 6, 1992, modified by Law No. 4394 of August 24, 2011); (iii) the MOF Regulation that approves the manual of functions of the Under Secretariat of Economy (Regulation MOF No. 17 of January 18, 2012); (iv) the Law that approves the national general budget for fiscal year 2014 (Law No. 1542 of December 30, 2013); (v) the Decree Law that organizes and coordinates the statistical services of the Republic (Decree Law No. 11.126 of February 20, 1942); and (vi) the Constitution of June 20, 1992. These laws and regulations clearly mandate the MOF to compile and disseminate budget execution data and other fiscal statistics, but do not mandate the MOF to compile and disseminate government finance statistics (GFS).¹⁵

Law No. 1535 establishes in Articles 47-49 that the MOF and the entities responsible for servicing the public debt will keep up to date records of all transactions, and that the MOF will establish the procedures to be followed to this effect. Article 54 states that public accounting should collect, assess, process, record, control and report on all revenues, expenditures, costs, net worth and other economic operations of public entities, and that the purpose of this information, among other, is to facilitate compilation of statistics on government finances. Article 67 states that the MOF shall provide to the Executive and to Congress a report with the accounting statements that present the financial, economic, budgetary and patrimonial position of all public entities, no later than March 31 of each year. Article 77 states that the General Directorate of Credit and Public Debt (DGCDP) is responsible for managing the credit and public debt system; while Article 78 states that the General Directorate of Public Accounting (DGCP) is responsible for managing the public accounting system, and preparing balances and financial reports.

Law No. 109/92 establishes in Article 9 that the Fiscal Policy Directorate is responsible for the analysis of developments in public revenues and expenditures, and in Article 10 that the Borrowing

¹⁵ Budget execution data refers to the figures each country compiles to monitor implementation of its budget over a certain period, usually following national concepts and classifications. Fiscal statistics is a broad term that refers to any and all statistics related to public finance, regardless of the methodology underlying their compilation. GFS is a narrow term that refers to fiscal statistics compiled in accordance with internationally accepted methodologies for macroeconomic statistics. At present, these methodologies are the *Government Finance Statistics Manual 2001 (GFSM 2001)* and the *Public Sector Debt Statistics: Guide for Compilers and Users 2011 (PSDSG 2011)*.

Policy Directorate is responsible for the design of the credit and borrowing policy of the public sector. Law No. 4394, among other, updates the organizational structure of the MOF. The new manual of functions for the Directorate of Macro-Fiscal Policy no longer includes as a function of the unit to compile GFS. Thus, at present the function of compiling GFS is not assigned to a specific unit within the MOF, although the unit that performed the function in the past continues to do so. This unit also reports GFS to the IMF's Statistics Department for dissemination in the *GFS Yearbook*. The DGCDP is currently responsible for preparing regular reports on public debt, but the assignment of this responsibility is under discussion in the context of drafting the unit's new manual of functions.

Law No. 5142 approves the budget for the fiscal year. It also approves the budget classifications for revenues, expenditures, and financing, applicable to all public entities. It further states that all these entities, which exclude municipalities and public corporations constituted as private enterprises, must be connected online to the Integrated Financial Management System (known in Spanish by the acronym SIAF). Article 106 establishes that the MOF shall inform the Executive and Congress about the financial position of the State before end-April of the following year, and that the set of accounting statements should present the consolidated financial, economic, and net worth position of all public entities, plus municipalities and public enterprises constituted as private enterprises.

Decree Law 11.126 states that the DGCDP and the Directorate of the Treasury are the statistical units responsible for the compilation of annual financial data, public debt data, and other related statistics. The Constitution in Article 28 states that people have the right to receive accurate information and that the public information sources are free to everyone. Article 166 established municipalities as the local governments with political, administrative, and normative autonomy; and independence with regard to collecting and using its resources. This article has significantly hindered the collection of fiscal data from municipalities.

Working arrangements for compiling and disseminating GFS are consistent with the assignment of responsibilities to the various units involved. Although as mentioned above, the responsibility to compile GFS is not currently assigned to any given unit.

Recommendation:

- Assign the responsibility for compiling and disseminating GFS to a specific unit of the MOF. As soon as possible assign the responsibility by law to the MOF.

0.1.2 Data sharing and coordination among data-producing agencies are adequate

The two main sources of information for compiling GFS are the SIAF and the Debt Management and Financial Analysis System (known in Spanish by the acronym SIGADE). The unit that compiles GFS has direct access to the accounting database (known in Spanish by the acronym SICO) of the SIAF, and the units responsible for compiling debt data and managing the debt database. No formal procedures have been established for data sharing and coordination among data-producing agencies. However, informal arrangements between the MOF and the CBP allow the timely flow of the source data among institutions.

Recommendation:

- Establish formal data sharing arrangements among data-producing agencies.

0.1.3 Individual reporters' data are to be kept confidential and used for statistical purposes only

The confidentiality of data reported to the MOF is protected by the Civil Service Law (Law No. 1626 of December 27, 2000), which states in Article 57, among other, that civil servants must keep secret information about confidential matters. Article 66 establishes that violation of the secrecy obligation is a serious infraction of the law, punishable by suspension of promotion, suspension from their position without pay, or dismissal.

Access to the databases is restricted to staff that need the information for performing their duties. Access requires specific permission and the use of passwords. Access is limited to retrieving information but does not allow modifying existing information. The databases are kept in a secure location.

0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response

The data producing agency has the necessary legal authority to collect the data required to compile fiscal statistics. Law 1535 in its Article 66 mandates all public entities to provide the MOF budgetary, financial and asset information within 15 days following the end of the reference month. It further mandates public entities to provide the MOF any additional information the MOF may request to discharge its functions. Failure to report data carries legal sanctions. Decree 8127/00 details the list of monthly and annual reports public entities must provide the MOF, which include monthly and annual reports on balances, budget execution, and bank reconciliation; and annual financial statements. Article 107 establishes sanctions for not reporting, including the suspension of funds provided by the Treasury and/or the non-processing of budget requests.

Law 5142 in its Articles 104-105 and 113-115 establishes mandatory reporting by public entities, deadlines for reporting, and penalties for non-compliance. These articles also empower the MOF to establish the procedures, formats, and other details that all reports must follow.

Recommendation:

- Whenever the responsibility for compilation and dissemination of GFS is assigned by law to the MOF, the obligation of public units to provide the necessary information and penalties for noncompliance should be included in the law.

0.2 Resources

0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs

Overall, the number of staff is insufficient to compile GFS in accordance with the guidelines of the *GFSM 2001*. The limited availability of staff is further accentuated by personnel studying abroad and high staff turnover. GFS are compiled by staff among other functions, as no personnel are dedicated exclusively dedicated to statistical tasks. The qualifications of the staff are adequate, and several staff has participated in GFS courses offered by the IMF. However, more personnel need to be trained in the international methodologies, especially if the proposed transfer of the function to another unit of the MOF takes place. Limited human resources are the main reason why the recommendations of the 2006 ROSC Data Module were not implemented. Salary levels are low, though similar to other public entities. There are informal, limited, measures in place to retain experienced staff.

Overall sufficient computing resources are allocated to statistical tasks. All staff has computers with the necessary software and access to the Internet. The MOF has a unit responsible for information and computing matters for the entire institution. This unit provides anti-virus software and back-up facilities. Physical facilities are adequate, but financing constraints prevent hiring of additional qualified personnel.

Recommendation:

- Assign adequate human resources to compiling and disseminating GFS to the extent possible,

0.2.2 Measures to ensure efficient use of resources are implemented

The MOF conducts annual reviews of staff, which are taken into consideration for promotion. Personnel are hired through a competitive process. Supervisors are responsible for ensuring the functions of their units are performed satisfactorily, and for training staff as needed. There are no periodic reviews of work processes. Expert assistance to evaluate statistical methodologies and compilation systems has been provided by international organizations.

Recommendation:

- Institute regular reviews and systematic measures to ensure efficient use of the resources allocated to compiling GFS.

0.3 Relevance

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored

The MOF meets the information requirements established in the corresponding national legislation and partially meets the statistical needs of international organizations. Other data users are not

consulted about their information needs. There is no structured or periodic process of consultation with users to review the usefulness of existing statistics and emerging data requirements.

Recommendation:

- Establish a structured process of reviewing the usefulness of GFS to meet all user needs.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality

The MOF is aware of the importance of quality as a key element of public trust. For example, substantial resources have been allocated to the SIAF, and today most public entities report information on line. All MOF units use the same database to meet their information requirements, thereby ensuring consistency in data sources. Staff training is actively supported. There are no externally recognized processes or activities that focus on quality currently in place.

Recommendation:

- Institute formal processes to ensure data quality (for example, regular cross checking with specific alternative data sources, such as monetary and financial statistics).

0.4.2 Processes are in place to monitor the quality during the planning and implementation of the statistical program

There are no formal processes to assess and improve the quality of GFS. However, some efforts are made to improve the quality of the statistics compiled. For example, an investigation of the statistical discrepancy between the overall deficit/surplus calculated as revenues minus expenses and the financing of the deficit resulted in the identification of some reasons for the discrepancy and the introduction of measures to reduce its size. Training of personnel in GFS methodology is actively pursued.

The monitoring processes in place to monitor the quality of statistics are mainly revisions by supervisors and cross-checking of data to ensure internal consistency. The SIAF has built-in checks for data to verify the accuracy of data submitted and a single chart of accounts is used for all public units. Training is provided on the SIAF to users of the system. No formal or systematic assessment of the quality of the statistics compiled is undertaken.

Recommendation:

- Institute formal processes to ensure the quality of statistical programs.

1. Assurances of integrity

1.1 Institutional Integrity

1.1.1 Statistics are produced on an impartial basis

The Civil Service Law in its Article 60 (item a) states that government officials are forbidden from using the authority or influence of their position or derived from third parties to exert pressure on the behavior of subordinates. Although GFS compilation is not supported by a specific law or provisions, a culture of professionalism ensures that they are compiled on an impartial basis.

Recruitment and promotion of personnel are based on an open competitive process. The choice and tenure of managers are based on an independent process. Formal and on-the-job training is provided to staff, including participation in international seminars and courses. Research and analysis are encouraged.

1.1.2 Choices of sources and statistical techniques as well as decisions about dissemination are informed solely by statistical considerations

The choice of source data is based on data requirements. The SIAF was established by law and the information provided to the system is also specified by legislation, and the information is entered online. The decisions about data dissemination are not based exclusively on statistical considerations, as evidenced by the MOF's decision to discontinue in 2008 the dissemination of GFS for aggregates of government larger than budgetary central government and of a report explaining main statistical developments, and the suspension since May 2013 of the dissemination of subannual debt reports. The MOF re-initiated the publication of the monthly and quarterly debt reports during the mission's presence in the country.

Recommendation:

- Disseminate GFS based strictly on statistical considerations.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics

The Press Department of the MOF monitors the coverage of economic events in daily newspapers and radio and television stations. In coordination with the corresponding technical area, the Press Department issues corrections and/or explanations as warranted.

1.2 Transparency

1.2.1 The terms and conditions under which the statistics are collected, processed, and disseminated are available to the public

The terms and conditions under which budget execution data are prepared and reported are established in legislation that is publicly available. However, no equivalent information is available

on the compilation and dissemination of GFS. A link between the MOF website and the IMF's Dissemination Standards Bulletin Board (DSBB), where GDDS metadata are posted, was removed in 2008.

Recommendations:

- Publicize the terms and conditions under which GFS are compiled and disseminated.
- Update and maintain current the GDDS metadata posted on the IMF's DSBB, and reestablish the link with the MOF website.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified

There is no prior access to statistics by officials outside the MOF. The procedures for authorizing the dissemination of GFS are deemed internal and are not made known to the public. The Under Secretary of Economy authorizes the dissemination of GFS.

1.2.3 Products of statistical agencies/units are clearly identified as such

All fiscal statistics disseminated by the MOF clearly identify the data-producing agency. Attribution is provided in CBP publications.

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques

Advance notice of major methodological changes in fiscal statistics is provided to the public. These changes are usually incorporated in the Budget Law and related regulations.

1.3 Ethical standards

1.3.1 Guidelines for staff behavior are in place and well known to the staff

Law 1626 states in Article 57 the responsibilities of civil servants, which include several items regarding appropriate behavior, and Article 60 states prohibits civil servants from engaging in a variety of specific actions that constitute misbehavior. Articles 67 and 69 list the penalties associated with infractions in the performance of their duties and obligations, which include dismissal. Furthermore, the MOF issued a *Code of Ethics* and a *Code of Good Governance* on February 2, 2012; and established an Ethics and Good Governance Committee. The *Code of Ethics* presents the ethical principles, ethical values, and ethical guidelines that staff must follow. The Code of Good Governance applies to the Minister and his senior management team. It specifies the policies to be followed by senior officials in the course of managing the institution.

2. Methodological soundness

2.1 Concepts and definitions

2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices

The compilation and dissemination of annual and sub-annual GFS at the national level does not follow the *GFSM 2001* methodology, and no decision has been taken to adopt the methodology. The compilation and dissemination of debt statistics does not follow the guidelines of the *PSDSG 2011*.

The authorities report annual GFS in *GFSM 2001* format to the IMF's Statistics Department for inclusion in the *GFS Yearbook*, but these data are not disseminated at the national level.

Recommendation:

- Adopt the methodology of the *GFSM 2001* and *PSDSG 2011* to compile and disseminate GFS at the national level. Prepare a detailed migration plan and timetable to adopt the methodologies.

2.2 Scope

2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices

To facilitate understanding the scope of the fiscal statistics compiled and disseminated by the MOF and the CBP, and their relationship to international standards, the institutional structure of the general government sector and public sector are set out and discussed below.

Box 1. Public Sector (as per Budget Law)

I. Central Administration Entities

1. Legislature (3)
2. Executive (14)
3. Judiciary (6)
4. General Comptroller of the Republic
5. Other State Entities (2)

II. Decentralized Entities

1. Central Bank of Paraguay
2. Regional Governments (17)

3. Autonomous and Autarkic Entities (23)
4. Public Social Security Entities¹⁶ (5)
5. Nonfinancial Public Enterprises¹⁷ (5)
6. Public Financial Enterprises¹⁸ (5)
7. National Universities (8)

There are 247 municipalities that are not included in the institutional structure because the Constitution grants them autonomy. There is also a non-autonomous pension fund within the MOF.

In addition, there are four enterprises constituted as private enterprises (in Spanish, sociedades anónimas), majority owned by the government, which are not included under nonfinancial public enterprises.¹⁹ Finally there are two binational hydroelectrical enterprises,²⁰ jointly owned by two governments each, which are also not included under nonfinancial public enterprises. Current legislation does not allow the MOF to collect data from these two binational enterprises.

In terms of the sectors and subsectors as defined in the *GFSM 2001*, the central administration (I.) constitutes the budgetary central government subsector; which includes within the MOF a non-autonomous pension fund. The autonomous and autarkic entities (II.3) plus the national universities (II.7) constitute the extra-budgetary units/entities subsector. The public social security entities (II.4) include only one social security fund according to international guidelines, the Social Prevention Institute; the four other entities are autonomous pension funds that should be classified as units of the financial sector.

The regional governments (II.2) are currently treated as state governments in the GFS reported for dissemination in the *GFS Yearbook*; however, upon closer examination they appear to actually be central government entities in the statistical sense, as they have very limited revenue and expenditure authority, and are not able to incur liabilities in their own right. Thus, the central government subsector according to the *GFSM 2001* guidelines is composed of the budgetary central government subsector, the extra-budgetary units subsector, the social security funds subsector, and the regional governments (in national terms: I+II.3+II.7+the Social Prevention Institute+II.2); while the general government sector is composed of the central government subsector plus the local governments subsector.

¹⁶ Instituto de Previsión Social, Caja de Seguridad Social de Empleados y Obreros Ferroviarios, Caja de Jubilaciones y Pensiones del Personal de la ANDE, Caja de Jubilaciones y Pensiones de Empleados De Bancos y Afines, and Caja de Jubilaciones y Pensiones del Personal Municipal.

¹⁷ Administración Nacional de Electricidad (ANDE), Administración Nacional de Navegación y Puertos, Dirección Nacional de de Aeronáutica Civil, Petróleos Paraguayos (PETROPAR), and Industria Nacional del Cemento.

¹⁸ Banco Nacional de Fomento, Crédito Agrícola de Habilitación, Fondo Ganadero, Caja de Préstamos del Ministerio de Defensa Nacional, and Agencia Financiera de Desarrollo.

¹⁹ Empresa de Servicios Sanitarios del Paraguay (ESSAP), Compañía Paraguaya de Comunicaciones (COPACO), Cañas del Paraguay SA (CAPASA), and Ferrocarriles del Paraguay SA (FEPASA).

²⁰ Itaipú Binacional and Entidad Binacional Yacyretá.

The nonfinancial public corporations subsector according to the *GFSM 2001* guidelines is composed of the nonfinancial public enterprises (II.5), plus the four public enterprises constituted as private enterprises, plus 50 percent of the two binational hydroelectrical enterprises. In turn, the financial public corporations subsector is composed of the Central Bank of Paraguay (II.1), plus the financial public enterprises (II.6). Thus, the public sector, according to the *GFSM 2001* guidelines, is composed of the general government sector, plus the nonfinancial public corporations sector, plus the financial public corporations sector.

The institutional coverage of the monthly GFS currently compiled and disseminated corresponds to the budgetary central government. GFS are also compiled annually (with monthly breakdown) for other broader levels of government (central government, nonfinancial public sector, public sector), but are not disseminated. To the extent that the institutional coverage of these broader levels of government reflects the issues identified above in connection to the coverage of the central government and nonfinancial public corporations subsectors, their coverage differs from the sectorization guidelines of the *GFSM 2001*. GFS do not cover all economic flows and stocks to the standard specified in the *GFSM 2001* summary statements and tables (Statement of Government Operations, Statement of Other Economic Flows, and Balance Sheet). In particular, they do not cover noncash flows and other economic flows.

Coverage of public debt data is also limited in terms of the *PSDSG 2011* summary statements and tables. The definition of public debt does not include all public sector units, and the coverage of debt instruments is limited to debt securities and loans. Furthermore, there is no information on short-term debt, debt by remaining maturity (except as reported to the Inter-American Development Bank (IDB), under the Latin American and the Caribbean (LAC) Debt Initiative), net debt, and debt securities at market value.

The definition of public debt in Paraguay is given in Article 41 of Law 1535, and it serves as the basis for the figures presented by the MOF in its reports. Article 41 defines public debt as the outcome of the long-term borrowing operations of the State. No short-term borrowing is allowed, except to meet temporary cash shortfalls, which is not considered public debt. The short-term monetary regulatory bonds issued by the CBP are also not considered public debt. Furthermore, public debt is defined as debt guaranteed by the Treasury, and not in terms of whether the borrower is a public institutional unit. As a result, certain debt liabilities of public sector units, in the internationally accepted definition of the term, are not included in the country's public debt data, among these the: (i) debt of the municipalities, (ii) debt of the binational hydroelectrical enterprises, (iii) ANDE (State-owned National Electricity Administration)'s debt to nonresident banks, and (iv) debt owed by PETROPAR for oil imports from Venezuela. The Financial Administration Modernization Law issued in 2013, allows the issuance of short-term Treasury securities, but its operating regulations have not been issued to date. This definition of public debt is not in accordance with international standards, where it includes all short-term and long-term debt liabilities incurred by all public sector units.

The MOF disseminates on its website (www.hacienda.gov.py) the following periodic reports which contain GFS: (i) Situación Financiera Administración Central (SITUFIN), (ii) Informe de las Finanzas Públicas del Paraguay, (iii) Coyuntura y Perspectivas Económicas, (iv) Informe Mensual- Informe de Finanzas Públicas, (v) Informe Financiero, (vi) Reporte Mensual de la Deuda Pública, (vi) Reporte

Trimestral de la Deuda Pública, (vii) Informe Anual de la Deuda Pública, and (viii) Situación al Cierre del Cuatrimestre (de la Deuda de Gobiernos Municipales).

The monthly SITUFIN, prepared by the Directorate of Macro-Fiscal Policy, presents information on revenues, expenditures, and financing in *A Manual on Government Finance Statistics 1986 (GFSM 1986)* format, and is the main data source to report information to the IMF's Statistics Department for inclusion in the *GFS Yearbook*. The MOF reports quarterly debt data to the IMF-World Bank's Public Sector Debt Statistics (PSDS) database, the World Bank's Quarterly External Debt Statistics (QEDS) database, and the IDB's LAC Debt Initiative database.

The CBP disseminates on its website (www.bcp.gov.py) the following periodic reports which contain GFS: (i) Informe Económico Mensual, (ii) Informe Económico Preliminar, (iii) Deuda Pública Financiera Externa Registrada en SIGADE, and (iv) Deuda Externa Total.

Recommendations:

- Disseminate the GFS currently compiled for levels of government broader than budgetary central government.
- Expand the coverage of flows and stocks of public units.
- Define public debt for statistical purposes as all debt liabilities of public sector units, in accordance with international guidelines.

2.3 Classification/sectorization

2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices

The definitions of the social security subsector, the central government subsector, the general government sector, the nonfinancial public corporations subsector, and the public sector are not consistent with *GFSM 2001* guidelines. GFS are compiled separately for the various subsectors, but as indicated previously are not disseminated at the national level. The classifications for revenue, expense, nonfinancial assets, financial assets, and debt do not follow the guidelines of the *GFSM 2001* and the *PSDSG 2011*. The classifications used, except for debt, correspond closely to the classifications of *GFSM 1986*, especially for revenues and expenditures.

The public debt is classified as domestic or external based on a residence criterion and on whether payment of the debt can be demanded in the national territory or not; whereas, the residence criterion is the sole basis to classify debt as domestic or external according to international standards. In addition, direct public debt is the debt contracted by the Treasury as the debtor, while indirect public debt is the debt contracted by other public or private units as the debtors, which has the guarantee of the Treasury, duly authorized by law. The MOF defines guaranteed debt as the sum of the indirect debt plus the direct debt paid by units other than the Treasury (although the debtor is the Treasury). This definition is not in accordance with international standards, which defines guaranteed debt based on the debtor.

The GFS include under domestic financing a term denominated “floating debt” (in Spanish, “deuda flotante”), which warrants an explanation. Floating debt is currently defined as the difference between expenditures “obligated” and expenditures transferred (see explanation under 2.4.2 below).²¹ The figures reported under floating debt actually represent the change in the level of this debt between the beginning and the end of a given period. It can be viewed as a partial adjustment for the difference in the time of recording of revenues and expenditures, as it approximates expenditures to a cash basis of recording. The remaining difference between the overall surplus/deficit and financing (domestic financing, external financing, and changes in deposits) is denominated difference in recording period. This term is confusing and can be misleading; it should be called statistical discrepancy. The floating debt is cleared to a very large extent by the end of the complementary period (February 28 of the following year); the remainder is reprogrammed; i.e., included in the budget of the following year.

Recommendations:

- Define, for statistical purposes, the institutional sectors and subsectors of the general government sector and public sector in accordance with international guidelines.
- Introduce the classification of flows and stocks recommended by the *GFSM 2001* and *PSDSG 2011*.
- Define external debt based solely on the residence criterion, in accordance with international standards.
- Define guaranteed debt by debtor exclusively in accordance with international standards.
- Replace the term “difference in recording period” by the term “statistical discrepancy”.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

Not all flows and stocks are valued at market prices. All cash transactions reflect actual market values of the day the transaction took place. Debt is recorded at face value and nominal value only. Transactions in foreign currency are converted to local currency using the average exchange rate reported daily by the CBP.

Recommendation:

- Record all flows and stocks at market prices.

²¹ Floating debt was previously defined as the difference between expenditures obligated and expenditures paid. The reason given for the change in the definition is that the new definition better reflects the expenditures actually incurred in a given period, as it eliminates the lag between the time the funds are available to pay the creditor and the time the creditor actually collects payment.

2.4.2 Recording is done on an accrual basis

GFS are compiled on a mixed basis, revenues on a cash basis, expenditures on an “obligated” (in Spanish, “obligado”) basis, and financing on a cash basis and due-for-payment basis. “Obligado” is a stage in the expenditure process, which follows the commitment to incur expenditure and precedes its payment, which warrants an explanation to understand the meaning of the term. To record expenditure as “obligado”, the entity incurring the expenditure must have a cash plan (one of the stages to implement the budget); without such a plan it cannot obligate the expenditure. Cash plans can be deferred in time based on the Treasury’s availability of funds; therefore, “obligado” is not properly a time of recording (such as accrual basis, commitment basis, or cash basis). After an expenditure is “obligado” the entity must then physically present a request for transfer of resources to the Treasury; again, Treasury can delay the transfer based on the availability of funds. Debt transactions are recorded on a cash basis.

A move to an accrual/accounting/budgeting basis is not being implemented. Arrangements are not in place to convert transactions to an accrual basis.

Recommendation:

- Introduce recording of flows and stocks on an accrual basis, as a complement to recording them on a cash basis.

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices

Most transactions are shown on a gross basis, except for amortization/borrowing. Corrective transactions are not netted against the original transactions. For example, tax refunds are treated as an expense.

Recommendation:

- Net corrective transactions against the original transactions.

3. Accuracy and reliability

3.1 Source data

3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions

Data sources for compiling GFS are comprehensive. Law No. 1535 establishes in Article 2 the SIAF within the MOF to ensure good management of public resources. It is mandatory for all public entities to comply with the system, except for municipalities and public corporations constituted as private enterprises. Nevertheless, these excluded entities provide information to the MOF, though it is not entered into the system. The SICO is a module of the SIAF that provides accounting information for most public units in the local currency (guaraníes). Only the binational

hydroelectrical enterprises do not provide information to the system. The Directorate of Accounting establishes the norms and regulations that the information entered into the SICO must follow, and to this effect has issued a plan of accounts, a chart of accounts, and budgetary classifications to ensure its standardization.

Debt information is recorded in SIGADE and linked to the SIAF by an inter-phase. It records all public debt, as defined by national legislation, i.e., debt with the guarantee of the Treasury. Debt without this guarantee is not classified as public debt, such as the debt of the binational hydroelectrical enterprises, the debt of the electricity corporation to banks abroad, and the debt of the oil corporation to a foreign supplier. The same entities excluded from the SIAF are excluded from SIGADE. However, information on the debt of municipalities is available and disseminated separately from public debt.

Additional sources of information for compiling GFS are the Treasury System (known by its acronym in Spanish as SITE), for information on the floating debt, and the CBP for information on deposits.

3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required

The information provided to the SICO follows a manual of accounts, chart of accounts, and budget classifications that align broadly with the *GFSM 1986*. As a result, the scope, time of recording, and valuation of source data are insufficient to compile GFS as outlined in the *GFSM 2001*. Missing information includes noncash flows and other economic flows, information is not collected on an accrual basis, and market values are not used for all flows and stocks. The budget classifications can be bridged with the *GFSM 2001* classifications. The level of detail of the data sources allows for consolidation of the various levels of government.

Recommendation:

- Develop data sources that approximate the definitions, scope, classifications, valuation, and time of recording required by current international methodologies.

3.1.3 Source data are timely

The timeliness of source data is adequate to compile GFS. A majority of the public units are connected to the SICO online. Municipalities and public corporations constituted as private enterprises (*sociedades anónimas*) provide monthly information every four months; both in hard copy format. Public units are well aware of the deadlines for reporting, and municipalities require a certification of compliance with reporting requirements to receive Treasury transfers. The timeliness of the information reported to the SIGADE is also adequate to compile debt statistics.

Recommendation:

- Develop quarterly data sources to compile GFS for municipalities and public corporations constituted as private enterprises, preferably in electronic format.

3.2 Assessment of source data

3.2.1 Source data-including censuses, sample surveys and administrative records- are routinely assessed, e.g., for coverage, sample error, response error, and other nonsampling error; the results of the assessments are monitored and guide statistical processes

Some verification procedures are in place to monitor the accuracy of data reported by public units. Data inconsistencies and out-of-trend values are investigated. However, source data are partially assessed by checking against different data sources, but not fully or on a regular basis.

Recommendation:

- Assess source data regularly against other related data sources, in particular monetary and financial statistics.

3.3 Statistical techniques

3.3.1 Data compilation employs sound statistical techniques to deal with data sources

Compilation procedures still involve some manual data entry which can lead to errors. The coverage of data sources is complete, and therefore there is no need to estimate missing data. Data are preliminary until the accounts for the year are closed in February 28 of the following year. Until that time data are noted as preliminary, afterwards the notation is removed. Compilation procedures are not fully documented and there is no link between the MOF website and the IMF's DSSB to access GDDS metadata. Discrepancies between subannual and annual data are eliminated.

Recommendations:

- Eliminate manual data entry to the extent possible.
- Document fully compilation procedures.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques

Appropriate statistical techniques as required. For example, a bridge table is used to convert GFS in *GFSM 1986* format to GFS in *GFSM 2001* format for reporting data for inclusion in the *GFS Yearbook*.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable

Intermediate results are partially checked against other data. The GFS are based on accounting and budget data. Intermediate budgetary data are validated against accounting records. Bank statements are reconciled daily against Treasury records. No cross-checking with the CBP on changes in deposits is performed, as the Treasury does not have its own data for deposits. Financing

and debt stock data are not reconciled with each other or against balance of payments and international investment position statistics.

Recommendation:

- Validate intermediate results to the extent possible.
- Develop data for deposits based on Treasury/MOF records.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Statistical discrepancies in intermediate data are partially cross-checked against related series. However, flows are not reconciled with the corresponding stock data, except for debt (narrowly defined as loans plus debt securities). Procedures are not in place to investigate classification/sectorization errors as a source of discrepancies.

Recommendation:

- Assess statistical discrepancies in intermediate data on a regular basis.

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated

Statistical outputs are checked horizontally and vertically. Values that are outside expected ranges are identified and investigated. The discrepancy between the deficit/surplus and financing, and between financing and changes in gross debt, are partially investigated.

Recommendation:

- Compare statistical outputs among national compilers on a regular basis.

3.5 Revision studies

3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3.)

The differences between preliminary and final data, main source of revisions for GFS, are investigated and the results used to make adjustments. However, no formal studies are conducted and the findings of the investigations are not adequately documented.

Recommendation:

- Document the revisions to GFS and the reasons for the revisions.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 *Periodicity follows dissemination standards*

Paraguay participates in the GDDS, which recommends that data on central government operations and central government debt be disseminated on a quarterly basis. Paraguay disseminates data on central administration (budgetary central government) operations monthly, and on central government debt monthly; therefore, it meets the periodicity recommendations of the GDDS.

The GDDS encourages that data on general government operations be disseminated annually, on interest payments of the central government monthly, and government guaranteed debt quarterly. Paraguay does not disseminate data on general government operations, but does meet the periodicity recommendations for the two other encouraged components.

4.1.2 *Timeliness follows dissemination standards*

The GDDS recommends that data on central government operations be disseminated with a maximum lag of one quarter and on central government debt with a maximum lag of one-to-two quarters. Paraguay disseminates data on central administration (budgetary central government) operations with a lag of 3 weeks (except in December, where there is lag of two months), and on central government debt with a lag of less than a month; therefore, it meets the timeliness recommendations of the GDDS.

The GDDS encourages that data on general government cash flow or operations be disseminated with a lag of 6 to 9 months, on interest payments of the central government with a lag of one quarter, and government guaranteed debt with a lag of one to two quarters. Paraguay does not disseminate data on general government operations, but does meet the periodicity recommendations for the two other encouraged components.

4.2 Consistency

4.2.1 *Statistics are consistent within the dataset*

Concepts, definitions, and classifications for compiling subannual and annual GFS are the same. The sum of quarterly GFS matches the annual GFS. The overall deficit/surplus and financing data are not consistent due to various factors, such as different time of recording, complementary period to record expenses, and other. Data on flows and stocks of nonfinancial assets and financial assets and liabilities are only partially reconcilable (only for public debt).

Recommendation:

- Investigate more fully the discrepancy between the overall surplus/deficit and financing.

4.2.2 Statistics are consistent or reconcilable over a reasonable period of time

A consistent time series is available for over ten years. When a major change in the classification of expense was introduced, the historical series was reconstructed. GFS generally reflect expected trends and changes in economic conditions.

4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks

GFS are used as an input for national accounts. The two sets of data classify four employer social insurance schemes in different sectors, and the national accounts include the two binational hydroelectrical enterprises and four nonfinancial public corporations constituted as private enterprises. As a result there are some inconsistencies between the datasets.

GFS and BOP use the same data source (SIGADE) for debt and grants, but no formal verification or reconciliation is undertaken between the MOF and the CBP. GFS are not reconciled with the monetary statistics on a regular basis. Furthermore, both datasets use different time of recording.

The GFS components comprising external debt data are reconcilable with the corresponding debt stocks. The external debt data disseminated by the MOF and the CBP are also reconcilable; as the latter identifies the amount derived from SIGADE (disseminated by the MOF) from the other components it adds to obtain the total external debt according to international standards.

Recommendation:

- Reconcile GFS with the other macroeconomic statistics compiled by the CBP on a regular basis.

4.3 Revision policy and practice

4.3.1 Revisions and/or updates follow a regular and transparent schedule

The main revision of GFS is related to the replacement of preliminary data by final data at the end of the budget cycle. The timing of the revisions is known and stable from year to year, but is not explicitly made known to the public. Revisions due to corrections occur as errors or omissions are detected, but these are not made known to the public.

Recommendation:

- Publicize revision cycle for GFS.

4.3.2 Revisions and/or updates follow a regular and transparent schedule

Users are informed whenever data are preliminary through a notation in the corresponding tables. The notation is removed whenever the figures become final.

4.3.3 Studies and analysis of revisions are made public

As indicated in 3.5, the differences between preliminary and final data are investigated and the results used to make adjustments. However, no formal studies are conducted or disseminated.

5. Accessibility

5.1 Data accessibility

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts)

GFS are disseminated according to the standard components of the *GFSM 1986* and not the *GFSM 2001*. However, GFS are reported in *GFSM 2001* format for inclusion in the *GFS Yearbook*. The statistics are disseminated in a clear manner. Commentaries on current period developments are not provided. The MOF website is not user friendly; access to statistics is not easy.

Recommendations:

- Disseminate GFS in accordance with the standard components of the *GFSM 2001* and the *PSDSG 2011*.
- Disseminate the *GFS Yearbook* submission in the MOF's website.
- Disseminate commentaries on current period developments.
- Improve MOF website to facilitate access to fiscal statistics.

5.1.2 Dissemination media and format are adequate

GFS are disseminated in pdf format, which does not facilitate re-dissemination. Current statistics cannot be accessed through an electronic database. GFS are reported to the IMF's Statistics Department in electronic form for publication in the *GFS Yearbook*. The MOF and CBP publications through which GFS are disseminated are listed under 2.2.1.

Recommendations:

- Disseminate GFS in a more user friendly format (for example, Excel files).
- Provide access to GFS through an electronic database.

5.1.3 Statistics are released on a preannounced schedule

GFS are not released according to a preannounced schedule; however, they do follow a regular dissemination cycle.

Recommendation:

- Release GFS according to a preannounced schedule.

5.1.4 Statistics are made available to all users at the same time

GFS are released simultaneously to all users.

5.1.5 Statistics not routinely disseminated are made available upon request

Non-published, nonconfidential, disaggregated data are provided upon request. The availability of additional statistics and the procedures for obtaining them are not made known.

Recommendation:

- Inform the general public about the availability of additional statistics and the procedures for obtaining them.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines or good practices are annotated

No GFS metadata are provided in the MOF website and there is no link to the GDDS metadata available on the IMF's Dissemination Standards Bulletin Board (DSBB). The metadata on the DSBB was last updated in 2004. The metadata for budget execution data are largely contained in publicly available laws and regulations.

Recommendations:

- Disseminate detailed metadata for GFS on the MOF website.
- Update GDDS metadata on the IMF's DSBB, and establish link to the metadata on the MOF website.

5.2.2 Levels of detail are adapted to the needs of the intended audience

The GDDS metadata are adequate for the intended audience. General information on budget execution data is available on the MOF website.

5.3 Assistance to users

5.3.1 Contact points are publicized

There is a general contact point for the Under Secretariat of Economy on the MOF website. An e-mail address is provided for users to direct their queries. For public debt the MOF website has an e-mail address (dgcdp@hacienda.gov.py) for users to send queries. This address also appears in all debt reports. Knowledgeable assistance is provided to users that request it. No separate contact points for enquiries to specific areas or about statistics are provided. Assistance to users is monitored.

Recommendation:

- Publicize a contact point for GFS.

5.3.2 Publications, documents, and other services, including information on any charges, are widely available

There is no single list of MOF publications. Users must search by Under Secretariat and Directorate. All MOF publications are provided free of charge.

Recommendation:

- Provide a single list of all MOF publications.

Table 4. Data Quality Assessment Framework (May 2012): Summary of Results for Government Finance Statistics

(Compiling Agency: Ministry of Finance)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; GDDS = Complies with GDDS Criteria							
Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
0. Prerequisites of quality							
0.1 Legal and institutional environment				X		Responsibility for compiling and disseminating GFS is not assigned to any entity or unit.	
0.2 Resources				X		Staff are insufficient to compile GFS.	
0.3 Relevance			X			Data needs from general public users are not identified.	
0.4 Other quality management			X			No formal processes to assess data quality.	
1. Assurances of integrity							
1.1 Institutional integrity			X			Data dissemination is not based solely on statistical considerations.	
1.2 Transparency		X					
1.3 Ethical standards		X					
2. Methodological soundness							
2.1 Concepts and definitions				X		GFS compilation and dissemination are not based on <i>GFSM 2001</i> and <i>PSDSG 2011</i> . There is no migration plan to current methodologies.	
2.2 Scope				X		GFS covers only budgetary central government. Data are available for other levels of government, but are not disseminated. Coverage of debt data is partial.	
2.3 Classification/sectorization				X		The definition of the social security funds and nonfinancial public sector does not follow international standards. <i>GFSM 2001</i> and <i>PSDSG 2011</i> classifications are not followed.	
2.4 Basis for recording			X			Not all flows and stocks are valued at market prices. Recording is not on an accrual basis.	

Table 4. Data Quality Assessment Framework (May 2012): Summary of Results for Government Finance Statistics (concluded)*(Compiling Agency: Ministry of Finance)*

3. Accuracy and reliability						
3.1	Source data			X		Source data to compile GFS are not adequate according to international standards in terms of scope, time of recording, and valuation.
3.2	Assessment of source data			X		Source data are not regularly assessed against other related data sources.
3.3	Statistical techniques			X		Some data are entered manually. Compilation procedures are not fully documented.
3.4	Assessment and validation of intermediate data and statistical outputs			X		Intermediate results and discrepancies in statistical outputs need to be investigated and compared to a greater extent and on a regular basis.
3.5	Revision studies			X		No formal studies of data revisions. Adequate documentation of revisions is not maintained.
4. Serviceability						
4.1	Periodicity and timeliness		X			
4.2	Consistency			X		The overall deficit/surplus and financing are not consistent. GFS are not fully reconciled with other macroeconomic datasets on a regular basis.
4.3	Revision policy and practice			X		No formal studies of data revisions are conducted.
5. Accessibility						
5.1	Data accessibility			X		GFS are not disseminated according to <i>GFSM 2001</i> standard components. No commentaries on current period developments are provided. GFS are not disseminated in user friendly formats, or according to a preannounced schedule.
5.2	Metadata accessibility				X	No metadata are available on the MOF website, and there is no link to the GDDS metadata posted on the IMF's DSBB. GDDS metadata were last updated in 2004.
5.3	Assistance to users			X		No specific contact point for GFS. No single list of MOF publications.

MONETARY STATISTICS

0. Prerequisites of quality

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.

The Law 489/95, *Organic Law of the Central Bank of Paraguay*, establishes in its Article 80 that “public institutions, banks, finance companies and other entities dedicated to financial intermediation, and private enterprises and entities shall provide to the Central Bank the data and information requested by it for the fulfillment of its functions, safeguarding the confidentiality of the information.” Article 81 of such law establishes that, for the purpose of financial programming, “the Ministry of Finance shall provide to the Central Bank reports on fiscal income and expenditure, budget execution, and other information needed for the elaboration of such programming.” Furthermore, Article 82 establishes that the Central Bank of Paraguay (CBP) shall produce, among others, monetary and financial statistics (MFS), as well as data on credit institutions under its supervision.

Article 106 of the Law 861/96 *General on Banks, Finance Companies, and Other Credit Institutions* establishes that the Superintendence of Banks (SB), which is a department of the CBP, “shall publish, at least on a quarterly basis, information aimed at disseminating the main indicators of the financial situation of the entities of the financial system.”

The Monetary and Financial Studies Department (DEMF), within the Office of the General Deputy Manager Office for Monetary Policy (SGGPM) of the CBP, is in charge of producing several macroeconomic statistics, among them monetary statistics. The *Organization and Functional Manual* of the CBP endows the Monetary Studies Division (DEM), which is a division of the DEMF, with the responsibility to “produce the monetary accounts on the basis of the consolidated balance sheets of the banking system, as well as reports on monetary variables, international reserves, short-term assets and liabilities of the banking system, and foreign exchange quotations.”²²

0.1.2 Data sharing and coordination among data-producing agencies are adequate.

Different departments of the CBP interact during the process of compiling monetary statistics. The SB collects data from commercial banks and finance companies for supervisory purposes, aggregates them and electronically transmits the aggregated data to the DEM. The Office of the

²² A new organizational chart was introduced in mid-2013, creating the SGGPM in charge of two Manager Offices, one for Macroeconomic Information and one for Macroeconomic Analysis and Research. A Department for Monetary and Financial Accounts, Fiscal Accounts, and Price Statistics will depend from the former. However, this reorganization is still in the process of implementation for the SGGPM.

Manager for Accounts and Finance (GCF) produces a daily trial balance of the CBP, and transmits electronically to the DEM the end-of-month trial balance. Informal coordination (based on interpersonal contacts) between the DEM, the SB, and the GCF ensures a smooth flow of information. The DEM receives also additional information from the Office of the Manager of Markets and from the Payment System Department (DSP). Authorized staff of the DEM has password protected access to the servers of the Office of the Manager of Information Technology and Communications, but only to aggregated data.

The CBP still needs to establish a formal exchange of information with the National Institute of Cooperatives (INCOOP), which is the institution that supervises credit unions, to receive data of the largest credit unions on a regular monthly basis. This information is crucial to compile a complete other depository corporations (ODC) survey, since credit unions represent around 15 percent of the total deposits of the system. The INCOOP collects these data and transmits them regularly to the CBP, but still on an informal basis. A project is underway to establish a deposit insurance scheme for credit unions, to be administered by INCOOP with participation of the CBP and the MOF; therefore, a formal process of data sharing is of the utmost importance.

Regarding internal exchange of information, the DEM has not yet managed to receive data on insurance corporations from the Superintendence of Insurance (SS), which is also a unit within the CBP. Previous IMF technical assistance missions recommended to start compiling the other financial corporations (OFC) survey with data from insurance corporations and other financial intermediaries, and advanced work in this direction. However, the SS does not share these data with the DEM.

Data transmission from the Ministry of Finance (MOF) to the SGGPM, mainly needed for fiscal accounts and government debt statistics but also useful in monetary statistics, is not adequate. Data sharing is irregular, and in several occasions the MOF stopped transmitting available fiscal data.

Recommendations:

- Sign an agreement between the CBP and INCOOP establishing a regular transmission of monthly data of credit unions as well as the exchange of other relevant information between both institutions.
- The SS regularly transmit to the DEM data on insurance corporations.
- Establish a formal process of data sharing through the signing of an agreement or memorandum of understanding between the CBP and the MOF.

0.1.3 Individual reporters' data are kept confidential and used for statistical purposes only.

The DEM receives only aggregated data of ODCs from the SB, and the disseminated tables show only aggregated figures.

Several articles of the Law 489/95 guarantee the confidentiality of the information reported to the CBP. As mentioned in item 0.1.1, Article 80 states that the confidentiality of the data provided to the CBP shall be safeguarded. Article 82 indicates that “statistics shall be published as aggregated data and omitting individual references, except for information included in balance sheets published for general knowledge by banks, finance companies, and other credit institutions.” Article 6 of such law establishes that “the information, data, and documents from third parties received by the Central Bank of Paraguay while performing its functions are from a confidential nature,” except when otherwise established by law. The obligation to preserve the confidentiality of such information and documents also applies to CBP staff with access to them, even after leaving the Bank. The law foresees penal responsibilities in case of breach of the confidentiality.

Moreover, the CBP’s *Information Security Regulation*, approved by Board’s Resolution N° 5 of July 1997, deals in detail with issues related to data confidentiality, integrity, and availability. This regulation identifies the different levels of confidentiality of the data collected by the CBP (public, reserved, and critical), accountability, access of third parties to data stored at the CBP, backup procedures, safeguard of the CBP’s hardware and continuity plans, etc. In April 2013, the CBP implemented Resolution N° 28 aimed at establishing the security management system according to the international standard ISO/EIC 27001.

Access to the electronically stored data is restricted to authorized personnel of the CBP, protected through passwords, and with different levels of access according to their responsibilities. The computer system of the CBP is protected by several levels of firewalls and software to detect intruders and to prevent attacks. Data stored in the mainframe are copied on magnetic supports and stored in a warehouse outside the CBP. According to the law, annual balance sheets must be kept during five years, while monthly balance sheets must be preserved during one year. After this period, back-up magnetic bands are overwritten, if needed.

0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.

Article 55 of the Law 861/96 establishes a time lag of ten calendar days for commercial banks and finance companies to report their balance sheets, elaborated according to the chart of accounts in force, to the SB. The reports are transmitted in an electronic format. Article 38 of this law makes the President and members of the board of the financial institutions directly responsible for the non-provision of information to the SB, or provision of false information.

Furthermore, Articles 88, 89, and 90 of the Law 489/95 foresee two levels of noncompliance: serious faults and minor faults. The non-reporting of timely and substantially correct data to the SB is considered a minor fault. Sanctions for this kind of noncompliance include warnings, fines equivalent from ten to one hundred minimum wages for the institutions, and fines equivalent from one to ten minimum wages for managers and auditors of the institutions. In practice, ODCs report regularly to the SB within the prescribed time frame.

0.2 Resources

0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.

The DEMF has a total of 14 staff distributed within its four divisions and the front office. Within the DEFM, the DEM has a permanent plant of five staff, but two of them are currently overseas pursuing post-graduate studies. The DEM has two sections, Monetary Programming and Monetary Statistics, being the latter the one in charge of compiling monetary statistics. Only one person works in this section, on a full-time basis. Two other divisions of the DEFM, each with only one staff, also work with data related to monetary statistics: the Financial Markets and the Fiscal Statistics divisions.

DEMF staff have a university degree with post-graduate studies, and three of them have a Masters degree. Except two persons with only three years of experience, the rest have worked continuously at the DEMF for between six and more than 20 years. Four staff participated in the IMF's Monetary and Financial Statistical course, while others attended courses offered by other international organizations, including the Economic Commission for Latin America and the Caribbean (ECLAC) and the Latin American Center for Monetary Studies (CEMLA). The IMF courses are the main source of external training on monetary statistics available to staff of the DEM. Staff are aware of revisions and updating of monetary statistics methodology and courses offered in this area.

Salary levels at the CBP are higher than in the rest of the public sector. At entry levels they are even competitive with the private sector, but not at higher levels of hierarchy, especially in the area of banking supervision. Although in general staff turnover is low, the DEMF has suffered in the recent past from a severe migration of staff to other areas of the CBP. During the last four years, eleven persons left the DEMF to work in other areas of the CBP.

Computer resources are adequate for the compilation of monetary statistics. Each staff has his/her own personal computer connected to the CBP's network, with the usual MS Office software, econometric packages, in-house developed software based on SQL, and broadband access to the Internet.

Technological advances have increased staff productivity in the DEMF. However, as a consequence of a reduction in personnel and staff migration, human resources are stretched thin and most probably are not sufficient to perform adequate data quality controls and tackle new tasks.

Recommendation:

- Evaluation by CBP management of the adequacy of the current staff resources to carry on all the tasks related with the compilation and dissemination of monetary statistics in line with international standards.

0.2.2 Measures to ensure efficient use of resources are implemented.

The CBP has established practices to periodically evaluate the use of resources dedicated to the compilation of monetary statistics. Title II, Chapter VII of the *Personnel Statute* describes the procedures to evaluate staff performance. Although in theory staff are subject to an annual performance review, this evaluation has been discontinued in past years. Extraordinary promotions are covered by Resolution N° 54 from August 2010, which provides standard guidelines for such promotions, until new management mechanisms are implemented.

The completion in early 2007 of the Integrated System of Economic and Financial Information (SIEF) substantially improved the efficiency of the compilation process of monetary statistics. Hardcopies and manual entering of data were replaced by the electronic access to source data and the automatically processing of the final tables. The system provides an operative database containing, among others, the trial balance of the CBP, and the balance sheets of commercial banks and finance companies; allowing online access to staff of the DEM to this database.

0.3 Relevance

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.

There is not a formal and structured process of consultation with monetary data provider and users. However, the DEM receives feedback from ODCs and users, and takes into account these comments and suggestions to improve the compilation and dissemination of monetary statistics. At the request of users, the DEM has modified some tables and also posted time series on the CBP website in an Excel format. Another source of monitoring the relevance of the monetary statistics was the technical assistance provided by the IMF.

The ongoing project to create a data warehouse, where users can access online the stored data and tailor their queries according to their specific needs will significantly improve the relevance and practical utility of monetary statistics. It is foreseen that the project will be completed by mid-2014.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The mission statement of the CBP describes the Bank as “an independent institution that develops an efficient and believable performance, based on the excellence of its values and talents, to be recognized at the national and international level.”

DEMF staff are fully aware of the importance of quality in building trust among monetary statistics users, and they are sensitive to the different dimensions of data quality. This is shown in the interest to receive technical assistance from the IMF and other international organizations on statistical issues and other areas, such as monetary policy or inflation targeting. Management fosters quality

and encourages staff to participate in relevant courses and seminars, especially those organized by the IMF.

Management and staff are aware of the trade-off between timeliness and accuracy, but this aspect is hardly relevant for monetary statistics, which are normally of a definite nature and based on balance sheet data.

0.4.2 Processes are in place to monitor quality during the planning and implementation of the statistical program.

The CBP does not have an established process of systematically monitoring the quality of the statistical program. For external advice on monetary statistics, the CBP relies almost exclusively on the technical assistance provided by the IMF. There is not an advisory board, within or outside the CBP, which controls the accuracy, timeliness, and scope of monetary statistics, and their adherence to international standards. The last review of the quality of the process of compiling monetary (and other macroeconomic) statistics was the 2006 ROSC Data Module mission.

The CBP has not implemented formal processes to deal with quality considerations in planning the statistical program.

Recommendation:

- Introduce processes to systematically monitor the quality of monetary statistics during the planning and implementation of the statistical programs.

1. Assurances of integrity

1.1 Institutional integrity

1.1.1 Statistics are produced on an impartial basis.

Article 1 of the Law 489/95 indicates that the CBP is a self-ruling technical organism with managerial and patrimonial autarky. Public employees in Paraguay become permanent staff after two years working continuously in the institution (Article 47, Law 1626/00), something ratified in Article 18 of the *Personnel Statute* of the CBP. These contractual conditions protect staff at the CBP against undue pressures or interference by other government agencies, ensuring their professional independence. Professionalism is guaranteed and promoted throughout the *Personnel Statute* and in the manuals of functions of each area of the CBP.

1.1.2 Choices of data sources and statistical techniques, as well as decisions about dissemination, are informed solely by statistical considerations.

The source data for monetary statistics are the balance sheets of the 16 commercial banks, the 11 finance companies, and the CBP, restricting the possibilities of manipulation through changes in the sample. Other financial statistics not based on accounting records, such as interest rates, are

produced using responses from all institutions of the system. For the classification of financial instruments and sectorization of the accounts, the DEM follows the methodology of the *Monetary and Financial Statistics Manual (MFSM)* and its *Compilation Guide (MFSCG)*.

The dissemination of monetary data follows an established procedure with internally set deadlines that, although not announced to the public, are consistently met. The periodicity and timing of data dissemination is never hampered by pressures from other government agencies.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.

The CBP continuously monitors monetary data reproduced by the press. In cases of misinterpretation of published data, the CBP comments on them through the SGGPM. There were no such cases of monetary data misinterpretation in the recent past.

1.2 Transparency

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.

Paraguay is a participant in the IMF's General Data Dissemination System (GDDS). Metadata on monetary statistics are accessible on the IMF's Dissemination Standards Bulletin Board (DSBB). The CBP website provides a link to the IMF's DSBB. The Law 489/95, posted on the CBP website, contains the legal terms and conditions for collecting monetary information, but they are not systematically presented to the general public.

The CBP's monthly publication *Informe Económico*, posted on the CBP website contains explanatory notes that provide some information on the terms and conditions under which monetary statistics are compiled.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified.

Informe Económico is produced by the SGGPM and sent for information to the President and the Board of the CBP before being posted on the CBP website.

The DEMF sends a daily monetary report to the CBP's President, members of the Board and other authorities responsible for the formulation of the monetary policy. This report is internal and solely for informative purposes and contains the daily monetary indicators. This report is also sent to the Minister of Finance, the IMF, the World Bank, and the state-owned Financial Development Agency (AFD). The general public is not aware of this early access.

1.2.3 Products of statistical agencies/units are clearly identified as such.

The CBP's monthly publication *Informe Económico* is available only through the CBP website. The front page clearly identifies the publication as a product of the SGGPM, with the logo of the CBP, and the address of the institution. All tables of the Statistical Annex contain the source of the data and the unit within the SGGPM that produces them. The CBP does not require attribution when its statistics or comments are reproduced elsewhere. Staff of the DEM regularly finds almost textual reproductions in newspapers and private sector reports, without citing the CBP as the source.

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.

Advance notice is not given to the public when there are major changes in methodology, but this is a very infrequent occurrence. However, when in the past the DEM revised the data as a result of methodological changes, a note was included to explain the break in the series. If needed, a press conference was called to explain the changes.

When the DEM takes the decision to expand the coverage of the ODC survey through the inclusion of the largest credit unions, it would be a good opportunity to inform the public in advance about the upcoming methodological change.

1.3 Ethical standards

1.3.1 Guidelines for staff behavior are in place and are well known to the staff.

The Law 1626/00, *Of the Public Function*, provides the general umbrella to regulate the legal situation of permanent and contractual public employees, including staff of the CBP. The law states rights, obligations, and incompatibilities of persons working for the public sector.

At the level of the CBP, its *Personnel Statute* from 2013 contains ethical rules for staff behavior. It specifically deals with the rights (arts. 37-40), obligations (arts. 41-47), and incompatibilities (arts. 48-56) of the CBP's staff, in a manner very similar to the Law 1626/00. The statute prohibits CBP staff to work anywhere else except as professors; to be managers, shareholders, or employees in any institution supervised by the CBP; prohibits providing persons outside the CBP with official documents other than by institutional channels; etc.

The CBP's *Information Security Regulations* establishes rules of conduct designed to minimize the risk of human error, theft, fraud, or misuse of information.

The CBP has a *Code of Ethics*, approved by Board Resolution in July 2008 and expanded in July 2013. The *Code of Ethic* covers issues of mutual respect, honesty and truthfulness, loyalty, confidentiality, efficiency, conflict of interests and incompatibilities, as well as the creation of an ethics committee. A copy of the *Code of Ethics* is distributed to CBP staff, who have to acknowledge receiving it. New staff has to undergo a one-week induction seminar, where they are familiarized by the Human Resources Department with the *Code of Ethics* and the *Personnel Statute*. In 2013, staff had to attend

a compulsory online remote training with evaluations on the *Code of Ethics* and the *Personnel Statute*.

2. Methodological soundness

2.1 Concepts and definitions

2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.

The methodological framework used by the DEM to compile the central bank survey and the ODC survey is consistent with the guidelines of the *MFSM* and the *MFSCG*. Supported by technical assistance from the IMF, the DEM managed to resolve prior discrepancies from these guidelines and migrated to the standardized report forms (SRFs) in 2007.

A depository corporations (DC) survey is compiled consolidating the central bank survey with the ODC survey. The main monetary and credit aggregates identified within this framework are: (1) monetary base (currency issued plus commercial banks' deposits in national currency and finance companies' reserve deposits in national currency at the CBP); (2) M1 (currency outside banks plus current account deposits in national currency of the private sector); (3) M2 (M1 plus savings deposits, term deposits, and savings deposits certificates of the private sector, all in national currency); (4) M3 (M2 plus foreign currency deposits of the private sector); (5) CBP's net international reserve assets; (6) central government's deposits with the CBP and CBP's credit to the central government; (7) CBP's credit to the ODC sector and ODC sector's deposits with the CBP; and (8) ODCs' credit to the private sector.

2.2 Scope

2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.

At end-January 2014, Paraguay's DC sector comprised the CBP, 16 commercial banks, 11 finance companies, and around 200 credit unions.

All commercial banks and finance companies submit electronically their consolidated balance sheets to the SB on a regular monthly basis using the Financial Communication Network of the SB. Data reported cover the headquarters and the domestic branches. The SB electronically transmits the aggregated balance sheets of both types of institutions to the DEM, which uses them to prepare the ODC survey. The central bank survey is prepared on the basis of the CBP's end-of-month trial balance, submitted electronically by the GCF to the DEM.

Credit unions experienced a rapid growth in the 1990s, and currently account for around 15 percent of deposits of the ODC sector. They are not under the aegis of the CBP but supervised by the INCOOP. Therefore, they do not report to the SB. As a result of technical assistance from the IMF,

the DEM is currently receiving from the INCOOP data from the 27 largest credit unions (Type A).²³ Since December 2008, the DEM includes their accounts in the ODC aggregated balance sheet submitted to the IMF's Statistics Department for publication in *International Financial Statistics (IFS)*. However, credit unions' data are missing from the monetary statistics published in *Informe Económico*, something that constitutes a significant shortcoming in the coverage. The reasons expressed by the CBP for not including the largest credit unions in the disseminated monetary data are partly because a formal regular data transmission from the INCOOP to the DEM has not yet been established, and also because the CBP has doubts about the quality of the credit unions' data.²⁴

The May 2012 DQAF indicates that "consideration must be given to the Financial Corporations Survey, when relevant." The main subsector of Paraguay's OFC sector is constituted by 33 insurance corporations, which manage total assets for around US\$ 100 million and are controlled by the Superintendence of Insurance (SS) within the CBP. Beyond insurance corporations, the OFC comprises (i) a second-tier state bank created in 2005: the AFD with assets at end-2013 for around US\$ 300 million; (ii) two state development funds (Fondo Ganadero and Crédito Agrícola de Habilitación), with combined assets for around US\$ 75 million; (iii) one housing development fund (SENAVITAT); (iv) three second-tier credit union centrals; (v) five pension funds that are autonomous from the central government; and (vi) two private pension funds. The DEM does not receive data from any of these institutions and consequently does not compile an OFC survey. The aggregated total assets of the OFC sector represent a little less than five percent of total assets of the ODC sector.

Recommendations:

- Expand the coverage of monetary statistics published in *Informe Económico* with data of Type A credit unions.
- Collect data from insurance corporations, the AFD, and other relevant financial intermediaries and start compiling an OFC survey.

2.3 Classification/sectorization

2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.

Sectorization of monetary statistics improved substantially after the introduction in 1995 of a common chart of accounts for commercial banks and finance companies. The chart of accounts

²³ Type A credit unions are those with total assets above US\$ 10 million. It is expected that four new credit unions will be graduated to Type A in 2014.

²⁴ Three STA technical assistance missions supported the compilation of credit unions' data, finding them adequate for inclusion in the ODC survey.

follows international accounting standards and contains enough detail to allow a classification and sectorization of instruments consistent with the methodology of the *MFSM* and the *MFSCG*.

Financial instruments are classified by type, maturity, and currency denomination (domestic and foreign). Account holders are separated into residents and nonresidents, in line with the principles of the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)*.

One exception to the sectorization recommended by the *MFSM* is the lack of separate identification between resident nonfinancial corporations, households, and nonprofit institutions serving households (NPISHs). Like the *2008 System of National Accounts (2008 SNA)*, the *MFSM* recommends the identification of these three domestic subsectors. However, the chart of accounts used in Paraguay provides only for a category of "Other resident sectors," where all three subsectors are combined. This shortcoming does not affect the calculation of net domestic credit, but will constitute a problem when the country starts producing financial accounts.

Another shortcoming is the lack of sectorization of accrued interest by ODCs. The CBP and ODCs record on an accrual basis, but the latter do not report the accrued interest together with its underlying instrument. This forces the DEM to impute the total accrued interest among the different instruments and sectors.

Finally, the deposits of two binational hydroelectrical enterprises (Itaipú and Yacyretá) are classified as liabilities to nonresidents, although the CBP revised the treatment applied to these entities in 2012. Now, they are considered residents for the portion that belongs to each country; i.e., half of the shares of each entity. Following this treatment, one half of the assets, liabilities, and production of the binational hydroelectrical enterprises are allocated to a resident institutional unit, and the other half to a nonresident institutional unit. In the case of deposits, the practical approach should be to classify them as deposits of resident nonfinancial public corporations.

Recommendations:

- Modify the chart of accounts of commercial banks and finance companies to allow for a separate identification of accounts of other nonfinancial corporations and households (including NPISHs).
- Reclassify the deposit of the binational hydroelectrical enterprises from nonresidents' deposits (excluded from broad money) to deposits of nonfinancial public corporations (included in broad money).

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

Foreign-currency-denominated financial assets and liabilities are converted first from the different foreign currencies into U.S. dollars. The balances in U.S. dollars are then converted into local currency using an "accounting" exchange rate. This accounting exchange rate is the average of the

buying exchange rates at the closing of the previous day. Gold holdings are valued at international market prices and converted into national currency using the “accounting” exchange rate. SDR holdings and other IMF accounts denominated in SDRs are revalued by the GCF once a year in April, when the IMF’s Finance Department provides the CBP with the information on exchange rates. When compiling the monthly central bank survey, the DEM adjusts the balances of SDR-denominated accounts using the end-of-month exchange rate provided by the IMF’s Statistics Department.

Securities and other financial instruments are valued at market prices or fair values by the CBP and ODCs. Shares of the Latin-American Export Bank (BLADEX) held by the CBP are valued at 90 percent of the quotation price of ordinary shares Class E at the end of the financial year, which can be accepted as adequate.

2.4.2 Recording is done on an accrual basis.

The CBP and ODCs record on an accrual basis. Accrued interest is reported together with its underlying instrument in the CBP’s trial balance, but not disaggregated by instrument or sector in the balance sheets of commercial banks and finance companies. When compiling monetary statistics, the DEM allocates the accrued interest on the basis of the outstanding balances of the accounts.

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.

Assets and liabilities of the CBP and ODCs are presented on a gross basis, with no netting of claims of a particular transactor against the liabilities to that transactor or group of transactors. Accounts in overdraft are recorded and reported as loans to the corresponding sector. Loans are recorded on a gross basis, with the provisions for loan losses reported as a negative asset subtracting from the total loans; when compiling the surveys, the DEM reclassifies these provisions as liabilities.

The CBP has entered into a long-term agreement with the International Financial Corporation involving (IFC) foreign currency swaps. The forward price for the unwinding of the operation is calculated based on the interest rates in national and foreign currency. GCF records these swaps for the notional value of the contracts as a loan in national currency from the CBP to the IFC, and simultaneously as a foreign currency loan received from the IFC. This treatment artificially augments assets and liabilities and runs contrary to the recommendation to record foreign currency swaps as the purchasing/selling of the currencies, with a simultaneous forward contract. For monetary statistics, the DEM only records the accrued interest on both legs of the contract, as financial derivatives on the asset and liability sides, which can be considered an acceptable approach.

When producing the “banking survey,” the DEM consolidates the accounts of the commercial banks in other items net. The DEM also produces a “nonmonetary depository corporations” survey, where it consolidates the accounts of the finance companies. The DEM consolidates then both surveys into an ODC survey, netting the accounts of the commercial banks and the finance companies.

3. Accuracy and reliability

3.1 Source data

3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.

Commercial banks and finance companies transmit electronically their balance sheets to the SB on a weekly basis, and on monthly basis ten calendar days after the end of the reference month. The introduction of a common chart of accounts in 1995 represented a major improvement in the classification and sectorization of financial instruments. A 12-digit code identifies each account, indicating its grouping in the balance sheet, the chapters within each group, liquidity, risk, residency, and subaccounts. The accompanying manual of accounts contains detailed instructions on the use and recording of each account. Additionally, the CBP conducted seminars with staff of the ODCs, explaining the principles behind the sectorization and classification of instruments, and the criteria used to distinguish between residents and nonresidents. To avoid misclassifications, the CBP issued two circulars providing ODCs with the definition of resident and nonresident units (SG N° 69/2001) and a comprehensive list of the nonfinancial public sector (SG N° 70/2001); no new explanatory documents regarding monetary statistics has been issued since then. The chart of accounts has been amended, as needed, to reflect developments in the market.

After receiving the electronic submissions of the ODCs, the SB performs more than 100 automatic consistency checks, which range from detections of incorrect codes to missing information, differences between assets and liabilities, incorrect additions, etc. If the submitted data fail any of this consistency checks, they are returned to the reporting institutions for their revision. Complete and correct data must be received by the 10th calendar day after the end of the reference month.

The CBP's financial statements are audited by an international accounting firm, which rotates every year (although legally it can be retained up to two years), by internal auditors, and also by the General Comptroller of the Republic. The 2012 annual balance sheet has been approved by the external auditors with an unqualified opinion, although highlighting the then ongoing process to solve the dispute for the debt of the MOF to the CBP.²⁵

3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required.

The DC survey is based on actual accounting records of the CBP and the ODCs (except for the lack of coverage of credit unions already mentioned in item 2.2.1). Therefore, no sampling or estimations are employed by the DEM. The structure of the balance sheet permits an adequate sectorization and

²⁵ This debt covered not only central government debt, but also liabilities of financial institutions in liquidation, of local governments, and of public nonfinancial corporations. It was converted in December 2012 into a perpetuity bond in national currency.

identification of the accounts of resident and nonresidents, and a proper sectorization of the resident accounts (except for the distinction within other resident sectors mentioned in item 2.3.1).

3.1.3 Source data are timely.

The GCF prepares the CBP's trial balance on a daily basis, and transmits electronically the end-of-month trial balance to the DEM. The SB receives all balance sheets from commercial banks and finance companies within ten days after the end of the reference month, and five days later transmits electronically the aggregated balance sheets to the DEM, allowing to finish the compilation process 20 days after the end of the reference month.

3.2 Assessment of source data

3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.

In addition to the automatic controls performed by the SB on the individual balance sheets, the DEM performs visual checks on the aggregated balance sheets to detect significant changes in the figures from month to month, or to confirm that new instruments or institutions are being captured in the reported data. When the DEM detects inconsistencies in the aggregated data, it investigates them first with the SB and, if needed, contacts the corresponding institution to clarify the situation.

The DEM does not have access to supplemental information that would allow it to check the consistency of the data provided in the balance sheet against this supplemental information. It does not have access to individual balance sheets, either, so some unjustified movements at the level of an individual institution may be hidden by errors in other institutions.

Staff of the DEM are comfortable about the quality of the data reported by ODCs, although they do not pay regular visits to the institutions to verify on site the accuracy of the information submitted.

3.3 Statistical techniques

3.3.1 Data compilation employs sound statistical techniques to deal with data sources.

The aggregated balance sheets of the ODCs and the CBP's balance sheet are inputted electronically and the corresponding tables generated automatically, reducing substantially the chances of error. Data reported by ODCs are complete and the DEM does not estimate missing information.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.

Some of the automatic checks performed by the SB focus on the conversion of foreign-currency-denominated assets and liabilities into local currency. The DEM does not seasonally adjust the monetary series.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information, where applicable.

International reserves and foreign assets and liabilities of the CBP are systematically checked against balance of payments (BOP) data. The main source of discrepancy between the CBP and the MOF regarding credit to government was the non-recognition by the MOF of the CBP's claim for the Treasury Bonds Law 1093/97. This problem was eliminated in December 2012, when the central government consolidated all its debt with the CBP (and also CBP's claims on some local government, public nonfinancial corporations, and banks in liquidation) through the issuance of a perpetual bond, eliminating the need for cross-checking of such data. The DEM does not check the data reported by banks on government securities holdings, because nowadays the sale of government securities is not restricted to banks but open to the general public through the stock exchange. At an aggregated level, balance sheet data of the CBP are cross-checked with ODC data. Because the DEM does not receive individual banks' data, it cannot check the consistency of the interbank positions.

Recommendation:

- Set up a practice of individual ODCs' data transmission from the SB to the DEM, so the latter can check the consistency of interbank positions and with the CBP's accounting records.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

When the DEM observes important changes in the aggregated data of the ODCs, it contacts first the SB and asks it to investigate the issue with the involved institution. If needed, the DEM contacts the relevant institution to solve the issue, but only in exceptional cases.

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.

The DEM follows only informal procedures to check the accuracy of the data reported by the ODCs and to detect large and unusual movements. As already said, the controls are visual. The DEM does not keep a file where it documents the most common detected mistakes. The DEM conducted seminars after the introduction of the new chart of accounts in 1995, and also in 2001 to explain the concepts of the *MFSM*, but this was the last training offered to ODCs on monetary statistics compilation issues. Furthermore, it does not organize regular courses to instruct officers of the banks and finance companies on how to report to the CBP.

3.5 Revision studies

3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).

The main source of revision of monetary data was the technical assistance provided by the IMF through its MFS missions. The DEM showed its commitment to improve the monetary statistics of the country, implementing most of the missions' recommendations and migrating to the SRFs in 2007. Data were revised from January 1995 onwards and the revision in the time series was indicated in the explanatory notes that accompany the tables of *Informe Económico*.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The central bank survey, monetary aggregates, private sector and total deposits, credit to the private sector, and interest rates are published on a monthly basis in *Informe Económico*, which is available in Spanish through the CBP website.

Although internally compiled, the CBP does not disseminate the ODC and the DC surveys, apparently because they may present figures different than the ones disseminated by the SB and therefore might confuse users. The dissemination of a DC survey is a requisite of the GDDS.

4.1.2 Timeliness follows dissemination standards.

Monetary statistics, except the ODC and the DC surveys, are disseminated with less than a one-month lag through *Informe Económico*, exceeding the requirements of the GDDS. *Informe Económico* is posted on the CBP website 25 days after the end of the reference month. The tables of the statistical annex of *Informe Económico* with CBP data are posted on the CBP website ten days after the end of the reference month.

Recommendation:

- Includes tables with the ODC and the DC surveys in *Informe Económico*.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

Monetary statistics are internally consistent. This includes the position of the CBP vis-à-vis the commercial banks, and the aggregated interbank position.

4.2.2 Statistics are consistent or reconcilable over a reasonable period of time.

Time series published in *Informe Económico* are consistent over time. The revisions in the time series that followed the IMF missions' recommendations were highlighted in explanatory notes.

4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.

International reserves calculated from the CBP's balance sheet are consistent with BOP data. It was not possible to check the consistency of foreign assets and liabilities reported by ODCs with balance of payment data, because the latter includes also assets and liabilities of other resident economic sectors. The banking sector positions in the international investment position (IIP) have not been consistent with MFS since 2011, with the IIP underestimating the deposits of nonresidents with ODCs by around 30 to 45 percent, depending on the reference period.

The main discrepancy between monetary and government finance statistics (GFS) on credit to government was eliminated in December 2012 through the issuance of a perpetual bond already explained in indicator 3.4.1. Flow data on deposits of the budgetary central government are compiled from CBP's monetary data, so no discrepancies exist here. Discrepancies exist in government deposits due to the MOF's misclassification of four pension funds as part of the central government, instead as of OFCs.

4.3 Revision policy and practice

4.3.1 Revisions and/or updates follow a regular and transparent schedule.

Monetary data published in *Informe Económico* are final and only exceptionally subject to revision. The annual balance sheet of the CBP is published on a preliminary basis and subject to revisions.

4.3.2 Preliminary and/or revised/updated data are clearly identified.

Preliminary data are highlighted in the tables of the statistical annex of *Informe Económico* through asterisks. Revised data are not identified. However, when important revisions took place due to errors in the data, a note was included in the tables but simply indicating the revisions and not the reasons for them.

4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).

The DEM does not perform studies and analyses of revisions.

5. Accessibility

5.1 Data accessibility

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).

Monetary statistics are disseminated through the CBP's *Informe Económico*, which is posted on the CBP website. The tables of the statistical annex present the information in a clear form and with an adequate level of detail, and are available to users in an Excel format. Comprehensive explanatory notes are included in the publications, with analyses of macroeconomic trends accompanying the monetary data.

5.1.2 Dissemination media and format are adequate.

Informe Económico is available only through the CBP website. The availability online in an Excel format of the tables of the statistical annex facilitates users' access to the data. To improve accessibility, the CBP is completing a data warehouse project, through which users will have access to the CBP's database and will be able to tailor their requests regarding the series and the time frame.

5.1.3 Statistics are released on a preannounced schedule.

The DEM has an internal production cycle with specified deadlines normally met, that aim to the posting of *Informe Económico* 25 days after the end of the reference month, and the central bank data ten days after the end of the reference month. However, this internal deadline is not made available to the public through a preannounced release calendar. This notwithstanding, the public is aware of the publication date.

Recommendation:

- Publish a preannounced release calendar for monetary data.

5.1.4 Statistics are made available to all users at the same time.

Every month, *Informe Económico* is presented in a press conference explaining the most relevant trends. A couple of hours after the press conference, the bulletins and the presentation are posted on the CBP website. Data contained in *Informe Económico* are not made available to external agencies prior to their public release.

5.1.5 Statistics not routinely disseminated are made available upon request.

The accessibility of monetary data in an Excel format through the CBP website has reduced significantly individual requests to the DEM. Upon request, the DEM provides non-published but

nonconfidential information. The CBP does not indicate that additional information can be obtained, but the public is aware of this possibility.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

The CBP website provides a link to the IMF's DSBB. *Informe Económico* contains detailed explanatory notes on each of the published tables. Metadata on monetary statistics are available through the IMF's DSBB, but had not been updated since 2004. At the time of the mission, the CBP sent revised MFS metadata to the Statistics Department, which were posted on the IMF's DSBB in March 2014.

5.2.2 Levels of detail are adapted to the needs of the intended audience.

The level of disaggregation contained in CBP's publications is sufficient to meet different audiences' needs, except for the fact that the ODC and the DC surveys are not published.

5.3 Assistance to users

5.3.1 Contact points are publicized.

Informe Económico does not contain names, telephones, and e-mail addresses of the persons that can be contacted in relation with monetary statistics, or a mailbox where queries can be directed. It does, however, identify the publication as a product of the SGGPM. Although no telephone numbers are included in *Informe Económico*, the switchboard number of the CBP is available on the homepage of the CBP website, but just as a general entry point.

The CBP offers a free-of-charge subscription service. Subscribers receive each month via e-mail a pdf version of *Informe Económico*. The CBP provides an electronic address to request this service. Additionally, one window of the CBP website encourages users to submit requests and comments, but to the CBP in general and not specifically on monetary statistics.

Recommendation:

- Include a mailbox in the CBP website where queries regarding monetary statistics can be channeled.

5.3.2 Publications, documents, and other services, including information on any charges, are widely available.

Because the CBP does not print hardcopies of its publications, but solely post them on its website, there is neither a catalog of publication, nor prices for the products. All publications can be downloaded from the CBP website free of charge.

Table 5. Data Quality Assessment Framework (May 2012): Summary of Results for Monetary Statistics

(Compiling Agency: Central Bank of Paraguay)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; GDDS = Complies with GDDS Criteria							
Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
0. Prerequisites of quality							
0.1 Legal and institutional environment			X			Regular and timely transmission of credit union's data from the INCOOP to the CBP needs to be institutionalized. The SS does not share insurance corporations' data with the DEMF. Data sharing between the CBP and the MOF should be formalized.	
0.2 Resources			X			The reduction of personnel and high staff turnover at the DEMF were only partly compensated by IT improvements. Current staff might be enough for data processing but not sufficient for systematical controls and analysis.	
0.3 Relevance			X			No formal consultation process with users of monetary statistics.	An ongoing project is developing a data warehouse, where users will be able to access online the stored data and tailor their queries. Target date: second half of 2014.
0.4 Other quality management			X			Only informal processes are in place to monitor the statistical program.	
1. Assurances of integrity							
1.1 Institutional integrity		X					
1.2 Transparency		X					
1.3 Ethical standards		X					

Table 5. Data Quality Assessment Framework (May 2012): Summary of Results for Monetary Statistics (cont'd)

(Compiling Agency: Central Bank of Paraguay)

2. Methodological soundness						
2.1	Concepts and definitions		X			
2.2	Scope			X		Monetary survey does not cover credit unions, which represent around 15 percent of the deposits of the sector. The CBP does not produce the OFC survey, with data of insurance companies and other financial intermediaries.
2.3	Classification/sectorization			X		No breakdown between other nonfinancial corporations, households, and NPISHs. No sectorization of accrued interest.
2.4	Basis for recording		X			
3. Accuracy and reliability						
3.1	Source data		X			
3.2	Assessment of source data		X			
3.3	Statistical techniques		X			
3.4	Assessment and validation of intermediate data and statistical outputs			X		No validation procedures on outstanding government securities between MOF and ODCs' data. Due to lack of individual banking data, no cross-checking of interbank positions. Only informal procedures in place to check the accuracy of reported ODCs' data. No documentation of the detected problems.
3.5	Revision studies			X		No systematic revision studies, but improvements introduced at the request of users.
4. Serviceability						
4.1	Periodicity and timeliness			X		Although internally compiled, the CBP does not disseminate the ODC and the DC surveys. Broad money aggregates disseminated on a monthly basis 25 days after the end of the reference period. Central bank data disseminated on a monthly basis ten days after the end of the reference period.
4.2	Consistency		X			Disseminate the ODC and the DC surveys in <i>Informe Económico</i> . Target date: first half of 2014.

Table 5. Data Quality Assessment Framework (May 2012): Summary of Results for Monetary Statistics *(concluded)**(Compiling Agency: Central Bank of Paraguay)*

4.3	Revision policy and practice			X			No systematic regular revisions. No revision studies are performed. When mistaken data are revised, a note in the table indicates that a revision took place, but not the reasons for the revision.		
5. Accessibility									
5.1	Data accessibility		X					The data warehouse project will improve data accessibility. Target date: second half of 2014.	
5.2	Metadata accessibility		X						
5.3	Assistance to users			X			No contact person, or mailbox, for monetary statistics queries available on the CBP website.		

BALANCE OF PAYMENTS STATISTICS

0. Prerequisites of quality

0.1 Legal and institutional environment

0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.

The *Organic Law of the Central Bank of Paraguay* (CBP), Law 489 of June 29, 1995, assigns primary responsibility and authority to the CBP for the compilation, processing, and dissemination of balance of payments (BOP) statistics. Article 82 of the CBP Law states that the CBP “shall prepare and publish statistics on monetary and financial issues, external payments, domestic prices, output and income, and on credit institutions subject to its supervision”. Article 72 establishes that the CBP “shall keep the Executive Branch and the Legislative Branch constantly informed of the behavior of prices, employment, external trade, balance of payments, and other economic indicators”. Finally, Article 118 states that the CBP “shall publish an annual report, approved by its Board of Directors that shall contain an analysis of the monetary, financial, and economic performance of the past fiscal year”. Working arrangements are consistent with this assignment of responsibility.

The International Economics Department (DEI) of the Office of the General Deputy Manager for Monetary Policy (SGGPM) of the CBP is responsible for compiling and analyzing BOP and international investment position (IIP) statistics, as well as other external sector indicators, including: foreign trade, foreign direct investment (FDI), total external debt, and official reserve assets.

0.1.2 Data sharing and coordination among data-producing agencies are adequate.

The sharing of BOP and IIP data among official institutions is adequate. Procedures are in place to provide for effective and timely flow of source administrative data.

The CBP signed a cooperation agreement with the Directorate General of Customs (DGA) in December 2007 to share data on foreign trade; the DGA provides monthly a CD with the information requested by the DEI to compile external trade statistics. Additionally, the CBP signed a cooperation agreement with the Ministry of Industry and Commerce in June 2013 to share additional data on foreign trade needed to compile international trade statistics.

The Ministry of Finance (MOF) shares with the CBP the public debt database—Debt Management and Financial Analysis System (SIGADE). This database is managed by the MOF and only three people from the DEI can access to the data to preserve the confidentiality.

For information on the external assets and liabilities of the banking sector and insurance companies, the CBP retrieves information from the databases maintained by the Superintendence of Banks (SB) and the Superintendence of Insurance (SS), respectively.

The MOF's Under Secretariat of Tax Revenue, as established in its Resolution 115/03, provides to the CBP the net worth and debt with related companies of nonfinancial private enterprises to support FDI compilation. Additionally, these enterprises should provide to the CBP a copy of their annual balance sheets, income statements, and related documents which are used to verify the information received in the surveys (see 3.1.1).

The CBP maintains regular contact with these agencies, although, there is no provision for regular meetings to coordinate and evaluate these statistics.

0.1.3 Individual reporters' data are kept confidential and used for statistical purposes only.

The CBP Law guarantees the confidentiality of data. Articles 6, 7, and 8 set out legal provisions establishing the obligation to maintain the secrecy and confidentiality of the information related to third parties. Article 82 establishes that "the statistics shall be published in the form of aggregate data, with no individual references, except with respect to accounting data published for general information purposes by banks, finance companies, and other credit institutions". Furthermore, documents submitted to the CBP from official surveys and/or reports are duly safeguarded to ensure their confidentiality. *The Information Security Regulation*, approved by the CBP Board in July 1997, establishes detailed rules of conduct designed to minimize the risk of human error, theft, fraud, or misuse of information. The *Code of Conduct* and its regulation, approved by the CBP Board in December 2012 and June 2013, respectively, establish the rights and responsibilities of CBP staff, including confidentiality issues (Articles 41.3 and 41.4). Chapter V of the *Code of Ethics* is also dedicated to the confidentiality.

Staff are aware of these regulations. Rules and regulations to prevent disclosure include penalties on staff who disclose confidential data. Access to individual data is restricted to staff who require the information in the performance of their statistical duties.

The annual letter requesting participation in CBP surveys for compiling BOP and IIP data includes references to the legal framework underlying the preparation of statistics and the confidentiality of information. References to the legal framework are also made in the quarterly questionnaires.

0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.

Article 80 of the CBP's Law establishes that "Public institutions, banks, finance companies, and other entities involved in financial intermediation, and private sector enterprises or entities shall provide to the central bank any data and information that it may request in the performance of its duties, preserving the confidentiality of the information". Legal sanctions and fines are foreseen in case of noncompliance by financial institutions with their responsibilities under the CBP law. However, there are no penalties for noncompliance (including misreporting) by nonfinancial private sector units.

The DEI tries to enforce the reporting of nonfinancial private companies and increase the response rate of the surveys. Among other measures to encourage response, the DEI seeks to reduce response burden by including in the surveys data previously submitted (for reporters' review) as well as adapting questions to reporters' terminology and accounting codes.

Recommendation:

- Enforce reporting from the nonfinancial private sector.

0.2 Resources

0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.

The Balance of Payments Division (DBP) of the DEI is responsible for collecting, processing, analyzing, and disseminating BOP and IIP statistics, as well as other external sector statistics, including external debt, FDI, and official reserve assets. The DBP is currently comprised of seven staff (one less than during the 2006 ROSC Data Module mission). It has three sections: Balance of Payments Section (two staff), Surveys Section (three staff), and Exchange Balance Section (one staff). Staff qualifications are adequate, with most professionals having a bachelor or master degree in economics. Salaries and benefits are above those offered by the central government. The DEI finds complicated to retain new qualified staff because after few years of training they usually move to other positions within the CBP.

Most staff have participated in courses on BOP and IIP methodology, including recent courses based on the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)*. These courses are organized by the IMF (both at headquarters and at the Brazilian Regional Training Center), and by the Center for Latin American Monetary Studies (CEMLA). The DEI comprises two other divisions: the External Trade Division (three staff) and the Economic Integration and External Debt Division (two staff), mainly involved in the preparation of merchandise trade statistics and external debt statistics, respectively. The CBP is planning to restructure the DEI and its functions. The DEI would comprise three divisions (Foreign Trade, Balance of Payments, and Foreign Direct Investment) which would be dedicated exclusively to the collection, compilation, and dissemination of external sector statistics; the analysis would be taken over by another department.

Working space, computer resources, and equipment are adequate to performed required tasks. Each staff member has his/her own computer connected to a main server with backup and system protection procedures. Hardware utilized for compiling and analyzing the statistical series is effective and periodically updated, although, the IT systems prepared to access to the SB and SI databases are very slow and need to be upgraded. The CBP's IT Department provides proper support on technical matters.

The financial resources allocated to the compilation of BOP and IIP statistics are not sufficient for supporting developmental work, specifically, the adoption of *BPM6* and improvements on the

coverage of external transactions and positions of the nonfinancial private sector. In 2009, the DEI started conducting new surveys to collect data on remittances, travel, other services, and FDI, with the financing of the European Union. However, the project could not be finalized due to breach of contract of the hired company to conduct the surveys.

Recommendations:

- Increase the number of staff dedicated to the compilation of external sector statistics to assure the smooth migration to *BPM6* and the improvement on the coverage of these statistics.
- Update the IT process to access to the databases managed by the SB and the SI, respectively.

0.2.2 Measures to ensure efficient use of resources are implemented.

Staff responsible for compiling BOP and IIP statistics have a good understanding of the concepts, procedures, and methods recommended by the fifth edition of the *Balance of Payments manual (BPM5)* and are aware of the main changes introduced by *BPM6*, which is planned to be adopted in the short term. For the most part, staff demonstrate dedication and initiative in their work. Generally speaking, the CBP encourages its staff to keep themselves up-to-date with international data recording and processing practices. The CBP evaluates performance of its different areas but individual performance is only evaluated for promotion purposes.

0.3 Relevance

0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.

Data users are not consulted or kept informed on the relevance and practical utility of existing data (for example, usefulness in terms of detail, periodicity, and timeliness). The CBP has not established procedures to consult with users (for example, user surveys, seminars, advisory committees), where feedback from data users is sought to review the usefulness of BOP data and to identify emerging data needs; nevertheless, informal contacts with data users (for example, students and academia) take place.

The CBP will resume its participation in regular meetings with the Southern Common Market (MERCOSUR), where there is a project to harmonize statistics and assess the way of implementing *BPM6*, based on the experience of other countries.

Recommendation:

- Establish procedures to identify the users' relevance and practical utility of existing data.

0.4 Other quality management

0.4.1 *Processes are in place to focus on quality.*

The CBP authorities are aware that continued efforts are needed to improve the quality of statistics produced by the CBP and that official statistics must have the confidence of users. This is the reason of the efforts made by the CBP to address most of the recommendations of the 2006 ROSC Data Module mission.

0.4.2 *Processes are in place to monitor quality during the planning and implementation of the statistical program.*

Monitoring processes (although no systematic) are conducted within the CBP to inform managers on the quality achieved for ongoing statistical activities (for example, surveys' response rates and timeliness evaluations).

Recommendation:

- Undertake regular reviews to identify steps necessary to maintain quality requirements.

1. Assurances of integrity

1.1 Institutional integrity

1.1.1 *Statistics are produced on an impartial basis.*

Institutional integrity is clearly recognized as essential to the credibility of statistical outputs. Processes and activities in the workplace promote a culture of institutional integrity, including the recognition of authors of methodological papers, peer review of statistical work, and organization of lectures and conferences. Institutional integrity is also promoted by encouraging formal training (using internal and outside experts) and on-the-job training in the BOP and IIP methodology and compilation methods. After attending courses on external sector statistics delivered by international or regional organizations, staff should make a presentation on the topics covered in the course to the rest of the division.

In December of 2012, the CBP issued a regulation on the process to access to positions of responsibility, which is based on relevant aptitude or expertise in each area. The CBP has encouraged the publication of methodological research and economic analysis documents on certain BOP and IIP items. The new treatment of the binational hydroelectrical enterprises (Itaipú and Yacyretá) was published and widely disseminated in 2012, and a document on FDI in Paraguay is annually released.

1.1.2 Choices of data sources and statistical techniques, as well as decisions about dissemination, are informed solely by statistical considerations.

The choice of data sources, methodologies, and statistical techniques are made solely on the basis of strict technical criteria. Decisions about data dissemination (timing, media, and other aspects) are based solely on statistical considerations.

1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.

The CBP attempts to avoid misinterpretation of statistics by holding press conferences and providing comments and clarifications when statistics are erroneously interpreted in the press or other public forums. There is a well-established practice to deal with data misinterpretation or misuse of statistics.

1.2 Transparency

1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.

The CBP Law, available on the CBP website, contains a set of general provisions establishing the obligation to compile and disseminate BOP statistics, the confidentiality of individual reporter's data, and other features.

1.2.2 Internal governmental access to statistics prior to their release is publicly identified.

In general, the national authorities have no access to statistics before they are released to the public.

1.2.3 Products of statistical agencies/units are clearly identified as such.

CBP statistical publications are clearly identified with the name and logo of the institution. The CBP does not require users to identify it as the source when reproducing these statistics but it is a usual practice.

1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.

During 2012, the CBP changed the treatment of the binational hydroelectrical enterprises in the national accounts, BOP, and IIP statistics, which had a significant impact in these statistics. Public notice was given at a press conference in early 2012, when quarterly national accounts were disseminated.

Recommendation:

- Inform users in advance of the introduction of *BPM6*-basis data.

1.3 Ethical standards

1.3.1 Guidelines for staff behavior are in place and are well known to the staff.

The *Code of Conduct for CBP Staff*, approved by the CBP Board in June 2013, establishes the rights and responsibilities of CBP staff, including hiring, selection process, promotions, performance evaluation, and confidentiality (Articles 14 to 17, 19-24, 28, and 50.10).

The regulations on the *Code of Ethics* (July 2008) and on the process to access to responsibility positions (December 2012) also contain the terms and conditions under which official statistics are compiled and are available to the staff.

The *Information Security Regulations* approved by the CBP's Board of Directors by Resolution No. 5 of July 1997 establishes rules of conduct designed to reduce the risk of human error, theft, fraud, or misuse of information to an acceptable level. The Resolution foresees disciplinary sanctions against staff that fail to comply with these provisions. Staff are aware of the existence of these regulations.

2. Methodological soundness

2.1 Concepts and definitions

2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.

The concepts and definitions used in preparing external sector statistics are consistent with the guidelines of *BPM5*. The CBP is aware of the need to implement *BPM6* and is planning to do it in the short term; nevertheless, there is no formal plan to undertake this task.

A clear distinction is made between the income component and the goods and services components. FDI is presented on the directional basis which is the method recommended in the CDIS. However, according to *BPM6*, FDI data have to be presented on a gross assets and liabilities basis in BOP and IIP statistics. Moreover, some tables disseminated by the DBP include financial derivatives (with no values) under direct investment; which is a departure from international guidelines. FDI transactions and positions are defined by applying the 10 percent or more of ownership rule.

Resident institutional units are defined in broad conformity with the *BPM6*.

Since 2012, the two binational hydroelectrical enterprises (Itaipú and Yacyretá) are considered 50 percent residents in Paraguay, in line with *BPM6*.²⁶ These binational enterprises are located on both banks of the Paraná river border with Brazil and Argentina, respectively. Itaipú (jointly and equally owned by the governments of Paraguay and Brazil) and Yacyretá (jointly and equally owned by the governments of Paraguay and Argentina) were established through special legislation enacted by Paraguay with Brazil on April 26, 1973 and Argentina on December 3, 1973. The CBP revised the BOP and IIP historical series in 2012 accordingly. The external debt historical series were revised in February 2014, in line with the *External Debt Statistics: Guide for Compilers and Users, 2013 (2013 EDSG)*.

Recommendations:

- Develop a comprehensive plan that lists actions and key target dates to migrate the BOP and IIP statistics to *BPM6*.
- Remove the financial derivatives line included under direct investment, in BOP and IIP presentations.

2.2 Scope

2.2.1 *The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.*

The scope is broadly consistent with international standards. Most resident-nonresident transactions are covered in the BOP statistics, including estimates on foreign trade not recorded by Paraguayan customs (energy, goods leaving the commercial free zones, and smuggling), workers' remittances (to be included in personal transfers in *BPM6*), reinvested earnings, nonfinancial private sector deposits abroad, debt arrears, and noncash transactions. Data on some services (for example, construction, and professional), compensation of employees, direct investment abroad and portfolio investment assets are not estimated.

Most resident-nonresident positions are covered in IIP statistics, including other accounts receivable and payable. Data on direct investment abroad, financial derivatives, and portfolio investment assets (most of which are assumed to be of relatively minor importance) are not estimated.

The coverage of the external transactions and positions of the nonfinancial private sector is not sufficient; the response rate of the surveys has decreased in the last years.

²⁶ Multiterritory enterprises are single enterprises that have substantial activity in more than one economic territory but for which branches are not able to be identified. In the case of a multiterritory enterprise, it is preferable that separate institutional units be identified for each economy. If that is not feasible because the operation is so seamless that separate accounts cannot be developed, it is necessary to prorate the total operations of the enterprise into the individual economic territories. The factor used for prorating should be based on available information that reflects the contributions to actual operations. For example, equity shares, equal splits, or splits based on operational factors such as tonnages or wages could be considered (*BPM6*, paragraph 4.43).

The DBP has included the external debt of Yacyretá and Itaipú in the BOP and IIP statistics, along with the rest of external transactions and positions of these enterprises. The financial costs of Yacyretá (interest costs accrued on outstanding debt liabilities) are not yet included in the external statistics, pending agreement on these costs to be reached between the involved governments.

At the time of the mission, the DEI resumed the publication of the external debt statistics and included the external debt of the binational hydroelectrical enterprises in the total external debt in line with the *EDSG 2013*. At the time of the mission, the DEI published a document: “International Investment Position and External Debt of Paraguay” explaining the consistency between IIP and external debt data, which now includes the external debt of the binational hydroelectrical enterprises. The document is available on the CBP website

(https://www.bcp.gov.py/userfiles/files/POSICION_DE_INVERSION_INTERNACIONAL_Y_DEUDA_EXTERNA_SET_2013.pdf).

The CBP does not compile the memorandum items included in *BPM6* (such as financial intermediation service indirectly measured (FISIM) and currency composition of debt instruments).

Recommendation:

- Develop a plan to collect and compile the memorandum items included in the standard presentation of *BPM6*, as relevant.

2.3 Classification/sectorization

2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.

BOP transactions and IIP positions are in line with the classification recommended in *BPM5*. The current account includes (i) goods; (ii) services (transport, travel, government goods and services n.i.e., and other services); (iii) income (primary income in *BPM6*) comprising compensation of employees and investment income; and (iv) current transfers (secondary income in *BPM6*). Goods are further disaggregated into (i) general merchandise, (ii) goods for processing, (iii) repairs on goods (these two last components should be reclassified to services in *BPM6* because in these cases there is no change of ownership), (iv) goods procured in ports by carriers (included under general merchandise in *BPM6*), and (v) nonmonetary gold. Exports and imports of the maquila sector (with no change in ownership) are recorded under goods for processing as recommended by *BPM5*; nevertheless, they should be reclassified to services according to *BPM6*.

The capital account is presented along with the financial account and the sum of their balances is calculated and disseminated. According to *BPM6*, the BOP should present the capital and financial accounts separately and their balances should not be aggregated.

The classification used in the financial account is broadly consistent with the one used in the IIP. BOP transactions and IIP positions include: (i) direct investment (equity, reinvested earnings, other capital (debt instruments in *BPM6*) and also financial derivatives, which as indicated in 2.1.1, need to

be excluded from FDI); (ii) portfolio investment (equity securities and debt securities); (iii) financial derivatives; (iv) other investment; and (v) reserve assets. Other investment is further classified into trade credits, loans, currency and deposits, and other assets and liabilities (insurance, pension, and standardized guarantee schemes need to be included in *BPM6*'s standard presentation as a separate item). Reserve assets are classified into monetary gold, special drawing rights (SDRs), reserve position in the Fund, foreign exchange, and other claims (the last two components are classified under other reserve assets in *BPM6*). SDR allocations are included in other liabilities and should be recorded under other investment as a separate item according to *BPM6*.

The sectorization system is broadly consistent with *BPM5*; however, in the tables disseminated by the DEI, only the other investment item in the financial account is disaggregated by sector. These sectors include: monetary authorities (central bank in *BPM6*, although the continued use of monetary authorities is endorsed in some cases), general government, banks (deposit taking corporations, except the central bank in *BPM6*), and other sectors, which, as recommended in *BPM6*, has to be further disaggregated into other financial corporations and nonfinancial corporations, households, and NPISHs.

The DEI has available information to provide the breakdown by sector in the following components of the financial account and IIP: portfolio investment (equity and debt securities), currency and deposits, loans, trade credits, and other accounts receivable or payable (for both assets and liabilities). Additionally, these breakdowns are being provided to the IMF's Statistics Department through the regular data submissions.

Nonfinancial public enterprises' (such as the binational hydroelectrical enterprises) claims and liabilities are attributed to other sectors; external debt transactions and positions are attributed to the institutional sector of the borrower.

Borrowing and lending between direct investors and direct investment enterprises are classified under the FDI, except when transactions/positions are between banks in line with *BPM6*.

Recommendations:

- Disseminate the financial account of the BOP and the IIP with sectoral breakdown.
- Implement the classification and sectorization recommended in *BPM6* as explained above.

2.4 Basis for recording

2.4.1 Market prices are used to value transactions and positions. For some positions, proxies are used.

For the most part, transactions are valued at market prices and, where information is not available, at nominal or book value. Foreign trade transactions are recorded on an f.o.b. basis, which is the value provided by DGA for both imports and exports. In 2012 and 2013, the private and public sectors issued bonds abroad, which were recorded in portfolio investment liabilities at market value.

However, the value of these bonds has kept constant since the issue date and compilers have assumed that the total amount of these bonds was acquired by nonresidents.

All transactions and positions are disseminated in United States dollars. Transactions in different currencies are converted using the mid-point exchange rate prevailing in the market on the transaction date. Otherwise, the average exchange rate for the period over which transactions are being measured is used. Positions in different currencies are converted at the rate prevailing on the balance sheet date.

Due to lack of position data in original currencies, some transactions in financial assets and liabilities of the nonfinancial private sector are estimated from difference of the positions and adjustments for exchange rate changes are not made. Therefore, these transactions may include exchange rate changes.

Recommendations:

- Revise the value of portfolio investment liabilities in the IIP using the market value at the end of each reporting period.
- Obtain information on the currency of denomination of financial assets and liabilities to exclude exchange rate changes when transactions are estimated from positions.

2.4.2 Recording is done on an accrual basis.

In general, change of ownership, as specified in *BPM6*, is the principle governing the recording of transactions. Goods should be recorded as of the time that the change of economic ownership takes place. Services are recorded when rendered, and reinvested earnings on direct investment are recorded in the period when earned—with the correspondent counter-entries in the financial account; if debt service payments are not made when due, arrears occur, and according to *BPM6*, they are recorded in the original debt instrument. In *BPM6*, arrears are separately identified in a memorandum item.

Since 2010, interest on reserve assets is recorded on an accrual basis (this amount should be recorded under a separate item; investment income on reserve assets, in *BPM6*). However, interest on public sector debt is recorded on a due-for-payment basis (contractually established payment dates) and income on portfolio investment liabilities is recorded on a cash basis.

Recommendations:

- Record interests on external debt, including portfolio investment, on an accrual basis.

- Record arrears in the original debt instrument (when implementing *BPM6*) rather than as other debt liabilities (short-term), which was the treatment in *BPM5*.²⁷

2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.

In line with *BPM6*, most current and capital account transaction are recorded on a gross basis, while financial account transactions are recorded on a net basis, separately for the individual asset and liability components. Due to lack of information, some services (for example, telecommunication) are being recorded on a net basis.

3. Accuracy and reliability

3.1 Source data

3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.

Source data used by the CBP are obtained from several data collection programs that are broadly adequate to compile Paraguay's BOP and IIP statistics. However, source data from customs and surveys on services and nonfinancial private sector's financial transactions are insufficient. The main data sources are: (i) administrative data from government agencies; (ii) enterprise surveys; and (iii) direct reporting mainly from nonfinancial enterprises. These data are supplemented by information obtained from some foreign and international financial institutions.

The CBP obtains administrative data from government agencies as follows:

- The DGA provides monthly data in a CD from SOFIA (fiscal database on customs tariffs), which includes detailed information on goods imports and exports based on customs documents at a national level and goods for processing (maquila). The information received does not disaggregate freight and insurance with nonresidents, which led the DBP to recently request additional breakdowns. Additionally, the Ministry of Industry and Commerce provides information on the country of origin (certificates of origin), which supplements exports data received from the DGA. There is a need to make adjustments to include energy, goods leaving the commercial free zones (CFZ), and smuggling.
- The MOF's General Directorate of Credit and Public Debt (DGCDP) and the CBP share the DMFAS. In Paraguay, the DMFAS produces flow and position data on the medium- and long-term public sector external debt (CBP, general government, and other public sector institutions). Disbursements and debt service (principal and interest) paid/unpaid on the due date are recorded on a transaction-by-transaction basis. The DGCDP also provides information on

²⁷ See new treatment of arrears in *BPM6* and the *External Debt Statistics: Guide for Compilers and Users (2013)*.

financial charges on the public sector external debt based on the MOF's legal definition of public debt (see 2.2.1 in the GFS detailed assessment).

- The DBP has access to monthly data from the SB's database to obtain information on services and external assets and liabilities of resident banks, other financial institutions, and exchange bureaus. This information is used to compile income, financial services, and flow and position data on direct investment, portfolio investment, and other investment (deposits, loans, and other external assets and liabilities) of these sectors.
- The DBP has also access to monthly data from the SS's database to obtain information on the external assets and liabilities of insurance companies. The SS provides annual information on insurance companies' insurance services, and quarterly transactions and positions data on direct investment and other investment assets and liabilities of these companies.
- The Under Secretariat of Tax Revenue provides a copy of the balance sheets, income statements, and other related documents of direct investment enterprises of the nonfinancial private companies at the end of the fiscal year, which is used by the CBP to estimate direct investment of the nonfinancial private sector. Previously, the DBP received these documents of all nonfinancial private enterprises holding assets and/or liabilities with nonresidents but it was decided to discontinue this practice due to the scarce information collected for BOP and IIP statistics.
- The Directorate of Tourism provides monthly data on the number of incoming and outgoing travelers.
- Other CBP departments provide data mainly on official reserve assets and yields. Data on reserve assets are provided by the CBP with transactions distinguished from valuation changes or with sufficient detail to enable derivation of transitions measures that exclude valuation changes.

Currently, the CBP conducts a quarterly enterprise survey mainly to collect data on FDI (equity, reinvested earnings and debt instruments between affiliated enterprises) from direct investment enterprises of the nonfinancial private sector. Additionally, this survey also requests data on services and other external financial assets and liabilities held by these enterprises, but the information collected on these items is insufficient. Questionnaires are sent to about 180 enterprises and the average response rate has decreased in the last years, from 86 percent in 2011 to 75 percent in 2012 and 47 percent in the first quarter of 2013. There is no comprehensive and up-to-date business register that provides the basis for sample surveys of business units; however, the CBP uses available frames developed for other administrative purposes.

In the period 2009-2010, the DEI conducted new surveys to collect data on remittances, travel, other services, and FDI, financed by the European Union. However, this project could not be completed due to a breach of contract of the hired company to conduct those surveys and the results on remittances were only used to supplement SB data on this item.

The CBP also collects data through direct reporting:

- Itaipú and Yacretá (binational hydroelectrical enterprises) provide information on selected external transactions and positions, including, exports of energy, investment income, payments to nonresident creditors, and external debt. This information is supplemented and cross-checked with data from the balance sheets obtained from their websites.
- ANDE (State-owned National Electricity Administration) provides data on loans liabilities to nonresident arising from the financing of its capital share in the binational hydroelectrical enterprises (not recorded in the DMFAS).
- PETROPAR (State-owned Petroleum Enterprise of Paraguay) provides data on its short-term debt liabilities to nonresidents suppliers (not recorded in the DMFAS).
- Domestic banks provide data on payments and receipts in foreign currency, that is, cash transactions in foreign currency that pass through them. This information is classified into eight components, according to BOP concepts, and could be very useful to supplement or verify data received from other data sources. The DBP only uses this data source to collect data on remittances credits, because most of the information provided is classified under the residual component "others". The CBP is planning to improve this data source creating new codes and explaining to the banks the importance to apply the appropriate codification for BOP purposes. However, this data source could contain transactions between residents; it would be useful to also request information on the residency of the transactors.
- The DBP also receives the balance sheets from the nonfinancial private direct investment enterprises which are used to verify survey's data. These balance sheets could be also used to obtain direct investment equity of the nonrespondent enterprises as the sum of (i) paid-up capital; (ii) all types of reserves; (iii) cumulated reinvested earnings; and (iv) holding gains or losses. The results should be multiplied by the percentage of foreign ownership, which could be obtained from the website, the financial press, or directly contacting those enterprises with larger equity.

Finally, the CBP supplements core source data with information obtained from the financial press and some foreign and international financial institutions:

- Data on merchandise imports and exports with Paraguay's trading partners based on the IMF' Direction of Trade Statistics (DOTS).
- Data on foreign deposits of the Paraguayan nonfinancial sector are obtained from the Bank for International Settlements (BIS) locational international banking statistics (table 7b).
- Data on Paraguay's deposits held in the United States based on information from the United States Federal Reserve.

- The financial press is monitored for information on international transactions and positions that need to be taken into account in the BOP and IIP compilation system.

Recommendations:

- Supplement direct investment data obtained through the surveys with the information collected from the balance sheets and income statements of the direct investment enterprises to improve the coverage of the FDI data as described earlier.
- Prepare and maintain a register of direct investment enterprises in Paraguay with precise information (for example, net worth and percentage of foreign ownership) to be able to establish a ranking of these enterprises and assure the inclusion of FDI data and other external sector related data, including services, from the largest direct investment enterprises.
- Obtain detail data on freight transport and freight insurance with nonresidents from the DGA on a regular basis.
- In coordination with the banking sector, improve the collection of data on payments and receipts in foreign currency by (i) including new concepts of BOP; (ii) assuring the appropriate classification of each item (above a threshold); and (iii) adding information on the residency of the transactors. The banking sector should be aware of the importance of the accuracy of these data for BOP purposes.
- Use the information collected from the United States Federal Reserve website only to verify information received from other data source, because this information, at least partially, is already included in the BIS data.
- Consider the differences in methodology when using data from DOTS to estimate BOP transactions.

3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required.

Source data (administrative records, enterprise surveys, and direct reporting) are broadly consistent with international standards. Specific procedures have been developed by the CBP to adjust data from various sources to improve coverage, classification, and valuation. In general, compilers are aware of differences between source data definitions and those required for BOP and IIP compilation, and make adjustments as far as possible.

3.1.3 Source data are timely.

Most source data for compiling BOP and IIP statistics are timely. Data compilation through surveys and direct reporting does not employ rigorous follow-up procedures to ensure timely receipt of respondents' data. Currently, coverage of the initial release of quarterly data for surveys is limited due to late respondents.

3.2 Assessment of source data

3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.

Accuracy of international merchandise trade, and other supplementary sources used to compile the BOP and IIP statistics are routinely assessed. Data from surveys are regularly analyzed, in particular to check for temporal consistency with related data sources such as balance sheets of the nonfinancial private sector enterprises.

3.3 Statistical techniques

3.3.1 Data compilation employs sound statistical techniques to deal with data sources.

Compilation procedures are conducted to minimize processing errors, such as coding, editing, and tabulation errors. Procedures to adjust for nonresponse are used. Data sources, although numerous, do not provide sufficient coverage and are not used as extensively as their potential (for example, the balance sheets of the nonfinancial private enterprises) to compile BOP transactions and IIP positions. However, most gaps in terms of coverage are known. The CBP has developed several procedures to supplement available data from various data sources. The CBP does not use sample techniques nor extrapolates data obtained from surveys.

Recommendation:

- Explore the use of sample techniques to derive grossing-up factors.

3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.

The CBP has developed several procedures to adjust data from various data sources for improving the coverage and classification in line with international standards. Of particular importance are procedures to estimate goods leaving the CFZ, travel, transportation, and several other services. The procedures are indispensable to overcome, to the extent possible, the insufficient coverage of some administrative data sources and the lack of surveys, particularly for several services. However, some of these procedures are not updated periodically; therefore, their results may not be too informative.

Goods

Adjustments to Customs data

Merchandise imports and exports unrecorded by customs are estimated (since the late-1990s) on the basis of international publications, such as data reported by Paraguay's trading partners to the IMF's Direction of Trade Statistics (DOTS) and special CBP studies.

Goods leaving the CFZ (called “re-exports” by the DEI) are goods that enter Paraguay and are resold to nonresidents from Brazil and to a lesser extent from Argentina (mainly in Ciudad del Este, Pedro Juan Caballero, Saltos del Guairá, and Encarnación) and are estimated to supplement customs data. The estimation process is described in a CBP’s working paper of February 2013 (not yet disseminated), which explains that the estimated values of these goods have two components: sales of recorded imports and sales of unrecorded imports:

- The value of the goods sold in the CFZ of recorded imports is calculated as the difference between imports recorded by the DGA and an estimate of goods consumed/used in the economy (domestic absorption). The resulting amount is increased by an estimate for freight and insurance, tariffs, value added tax, and sales markup.
- The value of the goods sold in the CFZ of unrecorded imported goods is estimated as follows: (i) it is assumed that the imports reported in the DOTS constitute Paraguay’s total imports of goods; (ii) the difference between import figures from the DOTS and those recorded by the DGA represent the value of unrecorded imports; (iii) it is assumed that all unrecorded imports are sold in the free zones; and (iv) this amount is increased by an estimate for freight insurance and sales markups.

The DEI is considering replacing these estimates with data on imported goods under the Decree 6406 of October 2005, which are provided by the DGA. The importers subject to this decree only have to pay 1.5 percent of value added tax (instead of 10 percent) and are obligated to resell their imported goods to nonresidents. Therefore, in principle, these imported goods collected by the DGA will be sold in the CFZ. This method would be a more accurate data source than the current estimates which are based on assumptions which may not fully reflect recent economic developments. The DEI will obtain the value of goods sold in the CFZ as the CIF value of goods imported under this decree increased by taxes and sales markup (estimated in 10 percent). The DEI is planning to incorporate the results of this study to the BOP statistics along with the implementation of *BPM6* and has already prepared a methodological note on goods leaving the commercial free zones (“re-exports”), which will be disseminated when this methodological change is implemented.

Data on energy exports are not included in the DGA database, but directly reported to the CBP by the two binational hydroelectrical enterprises and ANDE. The value of exports of energy is calculated as the sum of total billing minus domestic consumption plus compensation for transfer of energy, which is considered part of the cost of the energy.

Estimates on imports of smuggled goods and informal trade are based on export data reported by counterpart economies. Recently, these estimates were increased in a fixed amount to include the informal trade with Argentina based on a study on tendencies.

Services

The main procedures to estimate services include:

- Goods procured in ports by carriers and repairs on goods are estimated by extrapolating available data from previous periods.
- Data on freight transport are obtained from SOFIA; however, these data do not discriminate by residence.
- The National Tourism Secretariat (SENATUR) provides data on the number of visitors and the average length of stay (received from the Migrations Department) to estimate data on passenger transport (applying average market price of tickets) and travel (applying the average expenditure). The DEI plans to obtain data on air transport from the National Directorate of Civil Aviation (DINAC) to supplement the data received from SENATUR. Currently, compilers check the data received from SENATUR with data published by DINAC.
- Data on freight insurance are calculated as a percentage of data recorded at the DGA's foreign trade database.
- Data on telecommunications services are recorded on a net basis, without being disaggregated in its credit and debit components.
- Data on computer and information services are calculated by extrapolating previous available information.
- Data on government services debits are obtained from the budget execution and data on government services credits, which are currently estimated, could be obtained from the Ministry of Foreign Affairs.

Income

Quarterly balances deposited abroad by residents in Paraguay (based on estimates from data published by the BIS and the US Federal Reserve Board) are multiplied by the quarterly average LIBOR to obtain interest on deposits.

Distributed and undistributed profits are estimated as follows: (i) for direct investment financial enterprises, using information from the SB; (ii) for direct investment insurance companies, using information from the SI; and (iii) for private nonfinancial enterprises, using CBP surveys and enterprises' balance sheets.

Transfers

Workers' remittances data are collected from information on payments and receipts in foreign currency reported by banks. This information may include transactions between residents, but data are not adjusted accordingly. This information is supplemented with data received from some transport companies.

Grants and other current transfers from official multilateral and bilateral donors are obtained from the Secretariat of Planning. This information is supplemented with information from the CBP the MOF and the media.

Financial Account and IIP

The DBP is in the process of compiling data on investment in real estate made by nonresident households from information available at the bureau of the National Police, the national bureau of immigration, and the Land Registration Office. The DBP plans to use the same sources to collect data on investments in real estate made by nonresident corporations.

Recommendations:

- Revise the estimates of goods leaving the CFZ ("re-exports") using the data on imports under the Decree 6406 collected by the DGA.
- Review current estimates on imports of smuggled goods and informal trade in consultation with compilers from counterpart economies.
- Enact an agreement with DINAC to obtain data on transport for BOP purposes.
- In coordination with the Ministry of Foreign Affairs, conduct a survey to foreign embassies and consulates to obtain data on government services n.i.e (credits).
- Apply the residence criteria established in *BPM6* to include real estate estimates in external sector statistics.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information, where applicable.

Intermediate results are validated against other data sources. For example, the CBP verifies estimates of FDI and other external assets and liabilities with balance sheets and income statements for nonfinancial private sector enterprises.

The CBP also uses information reported in the financial press to verify high-value direct investment and other transactions, when appropriate.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

The behavior of few series is routinely assessed against related series (for example, freight and goods trade transactions). Among others, travel services and passenger transportation are not assessed.

The reported financial transaction data are reconciled with changes in the corresponding position data for all components of the IIP and a table explaining the reconciliation (transactions and other changes) is disseminated by the DEI on a regular basis in its publications.

3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.

Staff involved in producing BOP and IIP data monitor developments in the errors and omissions item and seek to understand them by assessing the consistency between entries in the current, capital, and financial accounts.

For goods trade data, the DEI conducts bilateral data reconciliation with partner countries within MERCOSUR.

3.5 Revision studies

3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).

Revisions of BOP and IIP data are studied and used internally to inform statistical processes, but formal studies are not conducted. CBP staff revise data periodically (but revisions are not regularly documented).

The revisions of BOP and IIP data series carried out in 2012, due to the new treatment of the two binational hydroelectrical enterprises, were analyzed and documented and the CBP disseminated an extensive study of the implications in the data.

Recommendation:

- Strengthen data revision policies and practices.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

Quarterly periodicity of BOP and IIP statistics meets the GDDS recommendations. Quarterly BOP and IIP data are disseminated since 2001.

4.1.2 Timeliness follows dissemination standards.

Timeliness of BOP and IIP data meets the GDDS recommendations. Quarterly BOP and IIP data are disseminated three months after the end of the reference period. Nevertheless, these data are

reported to the IMF's Statistics Department once or twice a year only, for their inclusion in the IMF annual publications.

Recommendation:

- Report quarterly BOP and IIP statistics to the IMF's Statistics Department with quarterly timeliness.

4.2 Consistency

4.2.1 *Statistics are consistent within the dataset.*

The BOP and IIP data are consistent within the dataset. Data on financial transactions of the BOP are consistent with changes in the IIP data, and a table explaining the reconciliation (transactions and other changes) is disseminated on a regular basis. Annual BOP data are the sum of quarterly BOP data.

During the last eight years, the net errors and omissions item has been large (except for 2006 and 2008) and has oscillated from negative to positive values, reflecting for the most part, the limitations in some estimation methods and the lack of coverage of certain services and financial transactions. The DBP monitors the magnitude and sign of the net errors and omissions, and efforts are made to understand what statistical deficiencies may have caused them.

4.2.2 *Statistics are consistent or reconcilable over a reasonable period of time.*

The BOP and IIP statistics are consistent over time. Annual statistics are available since 1995, and quarterly statistics since 2001. However, income on portfolio investment is only recorded from the third quarter of 2013 and the IIP shows positions in portfolio investment since 2011; therefore, the income account is not consistent with the positions recorded in the IIP.

When changes in source data, methodology, or techniques are introduced, the CBP revises the historical series accordingly, as far back as possible. The CBP explains such changes to users when the impact on the data is significant, for instance, in 2012, the CBP changed the residence criteria, in line with *BPM6*, to consider the two binational hydroelectrical enterprises 50 percent residents in Paraguay and revised the BOP and IIP historical series from 1995.

Recommendation:

- Establish a regular process to cross-check the consistency between each component of the income account and the corresponding position recorded in the IIP.

4.2.3 *Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.*

The BOP and IIP data are mostly consistent with other statistical frameworks:

- Monetary statistics use the same source data to obtain reserve assets; therefore, these data are fully consistent with IIP. However, there are large discrepancies between the liabilities of deposit taking corporations included in the IIP and those recorded in monetary statistics.
- The CBP publishes monthly external debt statistics consistent with IIP data. The MOF reports the general government external debt to the World Bank, which is disseminated in the Quarterly External Debt Statistics (QEDS) database. Currently, the data available in the QEDS website are not consistent with general government external debt data published by the DEI.
- International trade data recorded in national accounts are based on BOP data (which include estimates of unrecorded trade and other adjustments); therefore, NA and BOP should be consistent. However, there may be inconsistencies between the historical series of BOP and IIP and national accounts data due to the different periodicity and timeliness of both datasets.
- Direct investment data recorded in the IIP are consistent with the data published in the CDIS website. However, the preliminary 2012 data reported in the CDIS are not fully consistent with the IIP. This difference could be due to the different periodicity and timeliness of both datasets.

The CBP does not have regular and well-established procedures for evaluating the consistency of BOP and IIP data with statistics for other economic sectors.

Recommendations:

- Conduct regular meetings with other areas within the CBP to ensure the consistency of macroeconomic statistics.
- Conduct regular meetings with the MOF (at least twice a year) to discuss issues of common interest, coordinate the submission of external debt data to the World Bank (QEDS), and ensure the consistency of fiscal and external sector statistics.

4.3 Revision policy and practice

4.3.1 Revisions and/or updates follow a regular and transparent schedule.

The revision cycle of the BOP and IIP statistics is predetermined and reasonably stable. Revisions follow a regular schedule available to the public. Data for a new quarter is preliminary and subject to revisions during seven consecutive quarters. The revision cycle is associated with the availability of the source data; being part of the normal statistical process for incorporating new data. Policies and practices governing the revision of data are not disseminated nor documented in the BOP and IIP publications.

When revisions outside the regular cycle are called for, they are made known to the public. The CBP disseminated a document: "Technical Paper Explaining the Change from Nonresidents to Residents of the Binational Entities in Paraguay from 2012" to explain the revisions introduced due to the new treatment of the two binational hydroelectrical enterprises.

4.3.2 Preliminary and/or revised/updated data are clearly identified.

At the time of data dissemination, users are informed whenever data are preliminary or revised. New quarter data are always preliminary.

4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).

Analysis of differences between the revised and preliminary data is not published. Formal studies are not conducted. Revisions outside the regular cycle (for example, the inclusion of the binational hydroelectrical enterprises) are analyzed and explained.

5. Accessibility

5.1 Data accessibility

5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).

Paraguay's BOP and IIP statistics are mainly disseminated in two CBP publications: the Annual Report and the Monthly Economic Report. The DEI also publishes an annual report on FDI and a document on IIP and external debt. These publications are available on the CBP website (<http://www.bcp.gov.py>).

BOP and IIP statistics are published in *BPM5* format, and should be disseminated according to the standard components of *BPM6*. The CBP is planning to implement *BPM6*, but there is not a predefined date. Data also include the analytical presentation of the BOP and a reconciliation table between the financial account of the BOP and IIP data (transactions and positions).

The BOP and IIP statistics are sent to the IMF in *BPM5* format (through Excel files) that are converted by the IMF into a *BPM6* format for inclusion in its statistical publications. The mission underscored that the authorities should use the Integrated Correspondence System (ICS) to transmit data to the IMF.

The BOP and IIP statistics are disseminated in a clear manner with charts and tables to facilitate analysis. The CBP publications (annual report and semiannual monetary policy report) include commentaries on current-period BOP and IIP developments.

5.1.2 Dissemination media and formats are adequate.

Quarterly BOP and IIP data are disseminated in the annexes of most CBP publications (*pdf*. format). The DEI disseminates electronic tables with BOP and IIP statistics, showing data for the last three years and containing hidden columns with data from 1995.

The CBP is developing an online database which will contain the different statistics produced by the CBP to allow users easily retrieve data from the different datasets; this data warehouse will probably be available to the public this year.

5.1.3 Statistics are released on a preannounced schedule.

An advance release calendar is published indicating the dates the statistics are to be released. Quarterly BOP and IIP data follow a regular dissemination schedule. Data are disseminated three months after the end of the reference period and are included in the relevant CBP monthly publication.

5.1.4 Statistics are made available to all users at the same time.

The BOP and IIP data are released simultaneously to the public on the CBP website and through a reduced number of CBP hardcopy publications.

5.1.5 Statistics not routinely disseminated are made available upon request.

The CBP provides available unpublished BOP and IIP data series to users who so request, with due regard to confidentiality rules. No specific reference is made in BOP publications on the availability of unpublished subaggregates and the terms under which they are made available. However, the CBP may prepare customized reports to meet specific requests.

5.2 Metadata accessibility

5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

The CBP does not disseminate comprehensive BOP and IIP metadata. Few methodological notes are described in the monthly economic report.

At the time of the mission, the GDDS metadata posted on the IMF's Dissemination Standards Bulletin Board (DSBB) had not been updated since 2004.²⁸ The IMF also publishes in e-library Paraguay's BOP and IIP metadata, which was updated in 2011.

Recommendations:

- Prepare comprehensive BOP and IIP metadata, describing concepts, classifications, data sources, compilation methods, statistical techniques, and other relevant methodological aspects.
- Update and maintain current the metadata available in national publications as well as the GDDS metadata posted on the IMF's DSBB.

²⁸ Revised IIP metadata were posted on the IMF's DSBB in March 2014.

- Complete the IMF's BOP and IIP metadata questionnaires through ICS.

5.2.2 Levels of detail are adapted to the needs of the intended audience.

General use information about the BOP and IIP statistics is not available.

5.3 Assistance to users

5.3.1 Contact points are publicized.

Contact information (telephone, fax, and email address) is provided in the BOP and IIP bulletin and in FDI reports. These documents are available on the CBP website. CBP staff are available to answer queries from users, as stated in the CBP publications, albeit in an unsystematic way. No processes are conducted periodically to monitor and review assistance to users, but the DBP maintains an informal register of the different queries received.

5.3.2 Publications, documents, and other services, including information on any charges, are widely available.

The CBP website contains a list of publications (monthly, quarterly, and annual) that include BOP and IIP statistics. These publications also include other relevant external sector data such as merchandise trade, FDI, and external debt. Special documents (work documents and research papers) prepared by CBP staff related to BOP and IIP statistics may be also included in the CBP website. All these publications may be obtained free of charge.

Table 6. Data Quality Assessment Framework (May 2012): Summary of Results for Balance of Payments Statistics

(Compiling Agency: Central Bank of Paraguay)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; GDDS = Complies with GDDS Criteria							
Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
0. Prerequisites of quality							
0.1 Legal and institutional environment			X			The coverage of the nonfinancial private sector is not sufficient.	Review the CBP law to enforce the reporting of the nonfinancial private enterprises
0.2 Resources			X			The number of staff is not sufficient to improve the coverage and statistics techniques.	Increase staffing and establish an evaluation process
0.3 Relevance			X			Data users are not consulted on practical utility of existing data and rising needs.	
0.4 Other quality management			X			Regular and systemic processes to monitor data quality are needed.	
1. Assurances of integrity							
1.1 Institutional integrity		X					
1.2 Transparency		X					
1.3 Ethical standards		X					
2. Methodological soundness							
2.1 Concepts and definitions			X			There is no formal plan to migrate to <i>BPM6</i> .	Develop a comprehensive plan to implement <i>BPM6</i> in the short term
2.2 Scope			X			The response rate of the surveys addressed to the nonfinancial private sector has decreased. No plans to collect new requirements of <i>BPM6</i> .	
2.3 Classification/sectorization			X			Data by sector are only disseminated for total other investment in the financial account.	Disseminate the sectoral breakdown for all the components of the BOP and IIP (except for FDI and reserves).
2.4 Basis for recording			X			Interest on public debt and on portfolio investment is not on an accrual basis. Portfolio investment needs to be recorded at market value.	Record interest on portfolio investment on an accrual basis. Record portfolio investment at market value.

Table 6. Data Quality Assessment Framework (May 2012): Summary of Results for Balance of Payments (concluded)*(Compiling Agency: Central Bank of Paraguay)*

3. Accuracy and reliability						
3.1	Source data		X			Data from surveys are insufficient.
3.2	Assessment of source data	X				
3.3	Statistical techniques		X			Some estimations are based on assumptions and extrapolation.
3.4	Assessment and validation of intermediate data and statistical outputs	X				Review the process to obtain goods leaving the commercial free zones.
3.5	Revision studies		X			Studies are only made in case of large revisions (e.g., binational hydroelectrical enterprises)
4. Serviceability						
4.1	Periodicity and timeliness	X				
4.2	Consistency		X			There are inconsistencies between (i) MFS and IIP, (ii) QEDS and IIP, and (iii) the income account and the IIP.
4.3	Revision policy and practice	X				
5. Accessibility						
5.1	Data accessibility	X				
5.2	Metadata accessibility		X			A comprehensive metadata document is not available on the CBP website. GDDS metadata had not been updated since 2004. Revised metadata for IIP were posted on the IMF's DSBB in March 2014.
5.3	Assistance to users	X				Develop and disseminate a comprehensive metadata document and update it periodically.

Appendix I. Summary of the General Data Dissemination System (GDDS)

The GDDS recommends the following practices under each of the identified dimensions:

Data coverage, periodicity, and timeliness

- dissemination of reliable, comprehensive, and timely economic, financial, and socio-demographic data is essential to the transparency of macroeconomic performance and policy;
- the GDDS contains specific recommendations concerning coverage, periodicity, and timeliness for comprehensive frameworks as well as for data categories and indicators.

Quality

Data quality must have a high priority. Data users must be provided with information to assess quality and quality improvements. The GDDS recommends:

- dissemination of documentation on methodology and sources used in preparing statistics; and
- dissemination of component detail, reconciliations with related data, and statistical frameworks that support statistical cross-checks and provide assurance of reasonableness.

Integrity

To fulfill the purpose of providing the public with information, official statistics must have the confidence of their users. In turn, confidence in the statistics ultimately becomes a matter of confidence in the objectivity and professionalism of the agency producing the statistics. Transparency of practices and procedures is a key factor in creating this confidence. The GDDS, therefore, recommends:

- dissemination of the terms and conditions under which official statistics are produced, including those relating to the confidentiality of individually identifiable information;
- identification of internal government access to data before release;
- identification of ministerial commentary on the occasion of statistical releases; and
- provision of information about revision and advance notice of major changes in methodology.

Access to the public

Dissemination of official statistics is an essential feature of statistics as a public good. Ready and equal access by the public are principal requirements. The GDDS recommends:

- dissemination of advance release calendars; and
- simultaneous release to all interested parties.

Plans for improvement

The GDDS recommends that plans for improvement be developed for all areas in which shortcomings exist and that these plans be disseminated.

The GDDS also recommends that any needs for assistance be identified in the metadata. This may also be helpful for donors and technical assistance providers to prioritize their activities.

For each participating member country, the GDDS metadata provide descriptions of the dimensions listed above, together with plans for improvement and needs for assistance. This information is posted on the Dissemination Standards Bulletin Board (DSBB); participating countries are encouraged to also post the metadata on their national websites.

Source: The General Data Dissemination System: Guide for Participants and Users, 2013

<http://dsbb.imf.org>

Appendix II. Summary of the Special Data Dissemination Standard (SDDS)

The SDDS prescribes the following practices under each of the identified dimensions:

Data dimension (coverage, periodicity, and timeliness)

- the dissemination of 18 data categories, including component detail, covering the four main sectors (real, fiscal, financial, and external) of the economy, with prescribed periodicity and timeliness.

Access dimension

- the dissemination of advance release calendars providing at least a one-quarter advance notice of approximate release dates, and at least a one-week advance notice of the precise release dates; and
- the simultaneous release of data to all users.

Integrity dimension

- the dissemination of the terms and conditions under which official statistics are produced and disseminated;
- the identification of internal government access to data before release;
- the identification of ministerial commentary on the occasion of statistical release; and
- the provision of information about revision and advance notice of major changes in methodology.

Quality dimension

- the dissemination of documentation on statistical methodology and sources used in preparing statistics; and
- the dissemination of component detail and/or additional data series that make possible cross-checks and checks of reasonableness.

SDDS subscribers are required to:

- post descriptions of their data dissemination practices (metadata) on the IMF's Dissemination Standards Bulletin Board (DSBB). Summary methodologies, which describe data compilation practices in some detail, are also disseminated on the DSBB; and

- maintain an Internet website, referred to as the National Summary Data Page (NSDP), which contains the actual data described in the metadata and to which the DSBB is electronically linked.

The IMF staff are monitoring observance of the standard through NSDPs maintained on the Internet. Monitoring is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of advance release calendars.

Source: The *Special Data Dissemination Standard: Guide for Subscribers and Users, 2013*
<http://dsbb.imf.org>.

Appendix III. Data Quality Assessment Framework—Generic Framework

(May 2012 Framework)

Quality Dimensions	Elements	Indicators
<p>0. Prerequisites of quality</p>	<p>0.1 Legal and institutional environment—<i>The environment is supportive of statistics.</i></p> <p>0.2 Resources—<i>Resources are commensurate with needs of statistical programs.</i></p> <p>0.3 Relevance—<i>Statistics cover relevant information on the subject field.</i></p> <p>0.4 Other quality management—<i>Quality is a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.</p> <p>0.1.2 Data sharing and coordination among data-producing agencies are adequate.</p> <p>0.1.3 Individual reporters' data are kept confidential and used for statistical purposes only.</p> <p>0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.</p> <p>0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.</p> <p>0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.</p> <p>0.4.1 Processes are in place to focus on quality.</p> <p>0.4.2 Processes are in place to monitor quality during the planning and implementation of the statistical program.</p>
<p>1. Assurances of integrity <i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p>1.1 Institutional integrity—<i>Statistical policies and practices are guided by professional principles.</i></p> <p>1.2 Transparency—<i>Statistical policies and practices are transparent.</i></p> <p>1.3 Ethical standards—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are produced on an impartial basis.</p> <p>1.1.2 Choices of data sources and statistical techniques, as well as decisions about dissemination, are informed solely by statistical considerations.</p> <p>1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.</p> <p>1.2.2 Internal governmental access to statistics prior to their release is publicly identified.</p> <p>1.2.3 Products of statistical agencies/units are clearly identified as such.</p> <p>1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.</p> <p>1.3.1 Guidelines for staff behavior are in place and are well known to the staff.</p>

Quality Dimensions	Elements	Indicators
<p>2. Methodological soundness <i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i></p>	<p>2.1 Concepts and definitions—<i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i></p> <p>2.2 Scope—<i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.3 Classification/sectorization—<i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.4 Basis for recording—<i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices</i></p>	<p>2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.</p> <p>2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.4.1 Market prices are used to value flows and stocks.</p> <p>2.4.2 Recording is done on an accrual basis.</p> <p>2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.</p>
<p>3. Accuracy and reliability <i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.</i></p>	<p>3.1 Source data—<i>Source data available provide an adequate basis to compile statistics.</i></p> <p>3.2 Assessment of source data—<i>Source data are regularly assessed.</i></p> <p>3.3 Statistical techniques—<i>Statistical techniques employed conform to sound statistical procedures.</i></p> <p>3.4 Assessment and validation of intermediate data and statistical outputs—<i>Intermediate results and statistical outputs are regularly assessed and validated.</i></p> <p>3.5 Revision studies—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p>	<p>3.1.1 Source data are obtained from comprehensive data collection programs that take into account Paraguay-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, sectorization, classifications, valuation, and time of recording required.</p> <p>3.1.3 Source data are timely.</p> <p>3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and non-sampling error; the results of the assessments are monitored and made available to guide statistical processes.</p> <p>3.3.1 Data compilation employs sound statistical techniques to deal with data sources.</p> <p>3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.</p> <p>3.4.1 Intermediate results are validated against other information, where applicable.</p> <p>3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other potential indicators or problems in statistical outputs are investigated.</p> <p>3.5.1 Studies and analyses of revisions and/or updates are carried out and used internally to inform statistical processes (see also 4.3.3).</p>

Quality Dimensions	Elements	Indicators
<p>4. Serviceability <i>Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.</i></p>	<p>4.1 Periodicity and timeliness—<i>Periodicity and timeliness follow internationally accepted dissemination standards.</i></p> <p>4.2 Consistency—<i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p>4.3 Revision policy and practice—<i>Data revisions follow a regular and publicized procedure.</i></p>	<p>4.1.1 Periodicity follows dissemination standards. 4.1.2 Timeliness follows dissemination standards.</p> <p>4.2.1 Statistics are consistent within the dataset. 4.2.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.</p> <p>4.3.1 Revisions and/or updates follow a regular and transparent schedule. 4.3.2 Preliminary and/or revised/updated data are clearly identified. 4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).</p>
<p>5. Accessibility <i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p>5.1 Data accessibility—<i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p>5.2 Metadata accessibility—<i>Up-to-date and pertinent metadata are made available.</i></p> <p>5.3 Assistance to users—<i>Prompt and knowledgeable support service is available.</i></p>	<p>5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts). 5.1.2 Dissemination media and format are adequate. 5.1.3 Statistics are released on a preannounced schedule. 5.1.4 Statistics are made available to all users at the same time. 5.1.5 Statistics not routinely disseminated are made available upon request.</p> <p>5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated. 5.2.2 Levels of detail are adapted to the needs of the intended audience.</p> <p>5.3.1 Contact points are publicized. 5.3.2 Publications, documents, and other services, including information on any charges, are widely available.</p>

Appendix IV. Paraguay: Practices Compared to the SDDS Coverage, Periodicity, and Timeliness of Data

SDDS Data Categories	Coverage (meets SDDS requirement)	Periodicity		Timeliness	
		SDDS	Paraguay	SDDS	Paraguay
Real Sector					
National accounts	Yes	Q	Q	1Q	1Q
<i>Savings</i>	Yes	Q	A	1Q	3Q
<i>Gross national income</i>	Yes	Q	A	1Q	3Q
Production index/indices	Yes ¹	M	M	6W (1M encouraged)	9W
<i>Forward-looking indicators</i>	No	M or Q		1M or 1Q	
<i>Sectoral Balance Sheets</i>	No	Q		1Q	
Employment	Yes	Q	Q	1Q	1Q
Unemployment	Yes	Q	Q	1Q	1Q
Wages/earnings	Yes	Q	Q	1Q	1Q
Consumer price index	Yes ²	M	M	1M	1W
Producer price index	Yes ³	M	M	1M	5W
Fiscal Sector					
General government or public sector operations	No ⁴	A (Q encouraged)		2Q (1Q encouraged)	
<i>Interest payments</i>	No	A (Q encouraged)		2Q (1Q encouraged)	
<i>Financing of public enterprises</i>	No	A (Q encouraged)		2Q (1Q encouraged)	
<i>General government total gross debt</i>	Yes ⁵	Q	M	4M	1M
Central government operations	Yes	M	M	1M	1M (75D in Dec)
<i>Interest payments</i>	Yes	M	M	1M	1M (75D in Dec)
<i>Financing of public enterprises</i>	Yes	M	M	1M	1M (75D in Dec)
Central government debt	No ⁶	Q	M	1Q	1M
<i>Debt service projections</i>	Yes	Q	M	1Q	1M
Financial Sector					
Depository corporations survey	No ⁷	M	M	1M	
<i>Narrow monetary aggregates such as M1/M2</i>	Yes	M	M	1M	25D
<i>Disaggregated claims on residents sectors</i>	No ⁸	M	M	1M	

¹ Monthly economic activity index (IMAE).

² Geographical coverage restricted to the Greater Asuncion Area.

³ Coverage of the economy is not complete (for example, electricity production is not covered).

⁴ Not compiled although data are available to compile detailed GFS on general government operations.

⁵ Debt data based on remaining maturity not disseminated but can be calculated. No data on debt securities at market value.

⁶ Insufficient disaggregation by prescribed components.

⁷ The CBP compiles but does not disseminate a DC survey.

⁸ No break down between ONFC and HH/NPISH.

PARAGUAY

Central bank survey	Yes	M (<i>W encouraged</i>)	M	2W (<i>1W encouraged</i>)	10D
<i>Claims on other resident sectors, disaggregated</i>	Yes	M (<i>W encouraged</i>)	M	2W (<i>1W encouraged</i>)	10D
Interest rates					
Short and long term Government security rates	No	D			
Policy-oriented rates	Yes	D	D		2D
<i>Representative deposit and lending rates</i>	Yes	D	M		25D
<i>Financial soundness indicators</i>	Yes	Q	M	1Q	1M
Share price index	(...)	D			
External Sector					
Balance of payments	Yes	Q	A, Q	1Q	1Q
<i>Disaggregation according to the standard components of BPM6</i>	No	Q		1Q	
<i>Financial derivatives; assets and liabilities</i>	(...)	Q		1Q	
Official reserve assets disaggregated by components	Yes	M (<i>W encouraged</i>)	W	1W	1W
Template on International Reserves and Foreign Currency Liquidity	No	M		1M (<i>1W encouraged</i>)	
<i>Component in Section III, Table 6.1 of the SDDS Guide</i>	No	M		1M (<i>1W encouraged</i>)	
Merchandise trade	Yes	M	M	8W (4-6W encouraged)	4W
<i>Disaggregation by major components</i>	Yes	M	M	8W (4-6W encouraged)	4W
International investment position (IIP)	Yes	A(<i>Q encouraged</i>)	A, Q	3Q (<i>1Q encouraged</i>)	1Q
<i>Disaggregation by assets and liabilities according to BPM6</i>	No	A(<i>Q encouraged</i>)		3Q (<i>1Q encouraged</i>)	
<i>Financial derivatives; assets and liabilities</i>	(...)	A(<i>Q encouraged</i>)		3Q (<i>1Q encouraged</i>)	
External debt	Yes	Q	Q	1Q	1Q
<i>Disaggregation according to Tables 6.3-5 of the SDDS Guide</i>	No	Q		1Q	
Exchange rates	Yes	D	D	⁹	1WD
Socio-demographic Data					
Population	Yes	A	A (census every 10 yrs)	Regular basis	Variable

Note: Periodicity and timeliness: (D) daily; (W) weekly or with a lag of no more than one week from the reference data or the closing of the reference week; (M) monthly or with a lag of no more than one month; (Q) quarterly or with a lag of no more than one quarter; (A) annually; and (...) not applicable.

Italics indicate encouraged categories.

⁹ Given that data are widely available from private sources, dissemination by official producers may be less time-sensitive.

Appendix V. Users' Survey

With the assistance of the Central Bank of Paraguay (CBP) and as a complement to the IMF's own assessment, the mission surveyed a broad range of users in Paraguay of macroeconomic statistics during January and February 2014. With the assistance of the CBP, questionnaires were sent to 316 users, including academia, commercial banks, consulting firms, embassies and international organizations, members of the media, other financial intermediaries, private nonfinancial corporations, and the public sector. The survey asked users to evaluate four specific aspects of national accounts, the consumer price index (CPI), the producer price index (PPI), government finance statistics (GFS), monetary statistics, and balance of payments statistics (BOP)—namely (1) coverage and detail; (2) periodicity and timeliness; (3) other dissemination practices; and (4) accessibility. In addition, the users were asked to provide an overall assessment.

The mission received 73 survey responses and conducted interviews of selected users. The response rate and type of user surveyed is presented in Table 1. The ratings given by users are summarized in Table 2. The assessment below draws conclusions from the responses provided in the survey questionnaire or during user interviews.

Overall assessment

Users of Paraguay's macroeconomic statistics are generally satisfied with the overall quality of the official statistics. On a scale of 1 to 5, with 5 being "excellent" and 1 being "poor", the average for all official statistics was 3.8, with monetary statistics and prices being rated the highest and GFS the lowest. Most users considered the quality of Paraguay's statistics to be similar to other countries in the region.

In comparison with the users' survey conducted by the 2006 ROSC Data Module Mission, the results of the 2014 User Survey showed improvements in the overall assessment of the quality of official statistics across all statistical datasets. Users' overall opinion of the quality of official statistics improved to a rating of 3.8 in 2014 compared to 3.2 in 2006.

Coverage and detail

Users were broadly satisfied with the coverage of the official statistics, with a relatively higher number of positive responses attributed to monetary statistics and less to GFS. Users commented that the CPI should have a national coverage, instead of the Asuncion Metropolitan Area only. In addition, monetary statistics should expand its coverage to include the credit unions.

As for the level of detail provided, users were most satisfied with monetary and CPI statistics and relatively less satisfied with GFS and national accounts. In their comments a number of users requested additional detail in national accounts, GFS, and BOP statistics.

Periodicity and timeliness

A large majority of surveyed users (more than 85 percent) were satisfied with the compilation frequency of official statistics; with CPI and monetary statistics rated relatively highest and GFS lowest. Although still relatively high with around 70 percent, the level of satisfaction with the timeliness of official statistics was significantly lower than with periodicity. Users expressed a high level of satisfaction with the timeliness of prices and monetary statistics, but were less satisfied with GFS, national accounts, and BOP statistics. Users commented that the significant lags in the GFS limit their use for analysis of current economic developments.

Accessibility

An overwhelming majority of users (90 percent) access statistics via the official websites. Users indicated that they can by and large easily access official statistics for all sectors, with the highest rating given to CPI and monetary statistics. However, users expressed relatively less satisfaction with the accessibility to metadata, particularly GFS. A number of users commended the CBP for the assistance it gives to users when contacted.

Given the popularity of the official websites as a source of official statistics, a number of users suggested that dissemination via the internet and e-mail be further strengthened. In particular, users indicated that more options to download raw data (such as in Excel and/or time series format) should be made available from official websites.

Table 1. Paraguay: Questionnaire Results Analyzed by Type of User

February 2014

Type of Respondent	Total Sent	Total Received	In Percent Received
Academia and consulting firms	32	13	41%
Commercial banks	34	11	32%
Embassies and international organizations	23	10	43%
Media	16	6	38%
Other financial intermediaries	24	13	54%
Private nonfinancial corporations	118	14	12%
Public sector (central bank, ministries, agencies, nonfinancial corporations)	9	4	44%
Unions, civil society, and others	60	2	3%
Total	316	73	23%

Table 2. Paraguay: Results of Users' Survey*(in percentage of total responses)*

February 2014

General Information About Uses of Official Macroeconomic Statistics of Paraguay**1. Which official statistics do you use regularly?**

a. National accounts (NA)	60%
b. Prices	
· Consumer Prices (CPI)	90%
· Producer Prices (PPI)	34%
c. Government finance statistics (GFS)	40%
d. Monetary statistics (MFS)	67%
e. Balance of payments (BOP)	41%
f. Other	
· Production indices	29%
· Labor market	29%
· Merchandise trade	37%
· International reserves and foreign currency liquidity	41%
· External debt	32%
· International investment position	33%
· Other	5%

2. Where do you obtain official statistics?

a. Official press releases and publications on macroeconomic statistics	86%
b. Private sector summaries and analyses	40%
c. Official policy papers	38%
d. Publications from international organizations about Paraguay	52%
e. Other sources	8%

3. Do you refer to official descriptions of the sources and methods that were used to compile official statistics?

· Yes	51%
· No	49%

4. For what purposes do you use official statistics?

a. Analysis of current developments for short-term decision making	70%
b. Analysis of trends for longer-term policy formulation	59%
c. Econometric model building and forecasting	27%
d. Economic research	44%
e. Comparison with economic developments in other countries	49%
f. General economic background	42%
g. Other	15%

Table 2. Paraguay: Results of Users' Survey (cont'd)
(in percentage of total responses)

	NA	CPI	PPI	GFS	MFS	BOP	Average
5. Coverage and detail							
5.1 In general, are you satisfied with the coverage of official statistics?							
• Yes	84%	84%	83%	75%	92%	79%	83%
• No	16%	16%	18%	25%	8%	21%	17%
5.2 In general, are you satisfied with official statistics in terms of their level of detail?							
• Yes	74%	84%	79%	70%	88%	79%	79%
• No	26%	16%	21%	30%	12%	21%	21%
□							
6. Periodicity and timeliness							
6.1 Are you satisfied with the frequency of compilation of official statistics (e.g., weekly, monthly, quarterly, annual)?							
• Yes	81%	96%	92%	76%	94%	86%	87%
• No	19%	4%	8%	24%	6%	14%	13%
6.2. In general, do you consider that official statistics are disseminated with the appropriate timeliness (the time lag after the period to which they pertain (e.g., 60 days after the reference period))?							
• Yes	63%	91%	85%	54%	79%	67%	73%
• No	37%	9%	15%	46%	21%	33%	27%
□							
7. Other dissemination practices							
7.1 Do you know if there is a publicly disseminated calendar that announces in advance the dates on which the various official statistics will be disseminated?							
• Yes	45%	54%	40%	34%	52%	41%	45%
• No	55%	46%	60%	66%	48%	59%	55%
7.2 If there is a calendar of release dates, in your experience, are official statistics released on the dates announced?							
• Yes	65%	78%	65%	52%	72%	55%	64%
• No	35%	22%	35%	48%	28%	45%	36%
7.3 Is there enough information about revisions to official statistics?							
• Yes	73%	78%	67%	70%	71%	70%	72%
• No	27%	22%	33%	30%	29%	30%	28%
□							
8. Accessibility							
8.1 Can you easily access official statistics?							
• Yes	89%	97%	93%	78%	93%	86%	89%
• No	11%	3%	8%	22%	7%	14%	11%
8.2 Can you easily access information pertaining to official statistics you use (explanatory notes, methodological descriptions, reference concerning concepts, classification, statistical practice)?							
• Yes	70%	80%	65%	46%	65%	62%	65%
• No	30%	20%	35%	54%	35%	38%	35%
8.3 Is the above information on methodology sufficiently clear and at an adequate level of detail to be useful to you?							
• Yes							52%
• No							18%
• No Opinion							30%
8.4 How do you get access to official statistics?							
• Official releases							47%
• Hard copy publications							45%
• Data specifically requested							23%
• Official website							90%
• Other							5%
• E-mail requests							38%

Table 2. Paraguay: Results of Users' Survey (concluded)
(in percentage of total responses)

	NA	CPI	PPI	GFS	MFS	BOP	Average
9. Overall assessment							
9.1 In your opinion, is the underlying methodology of official statistics sound and appropriate?							
• Yes	88%	87%	89%	86%	94%	85%	88%
• No	12%	13%	11%	14%	6%	15%	12%
9.2 In general, do you consider official statistics to be unbiased and accurate?							
• Yes	74%	80%	78%	76%	87%	75%	78%
• No	26%	20%	22%	24%	13%	25%	22%
9.3 How would you compare the quality of official statistics of the Paraguay with those of other countries in the region?							
• Better	26%	34%	18%	24%	27%	21%	25%
• Same	46%	56%	63%	42%	62%	55%	54%
• Worse	28%	10%	18%	33%	11%	24%	21%
9.4 How do you assess the overall quality of official statistics? (1 rated as poor and 5 as excellent)							
(1=poor; 5 = excellent)	3.7	3.9	3.8	3.5	4.0	3.8	3.8

NA = National Accounts; Prices refers to: CPI (Consumer Price Index) and PPI (Producer Price Index);

GFS = Government Finance Statistics; Monetary = Monetary Statistics; and BOP = Balance of Payments Statistics

Box 1. Paraguay: Comments by Users of Macroeconomic Statistics

Additional comments, including areas where you see room for improvement:

Methodological Soundness

- The national accounts statistics base period is old and should be rebased.
- The scope of fiscal statistics should cover the entire public sector, not only central government.
- Detail is missing in national accounts statistics, such as by sub-sectors of industry, and public and private investment.
- The CPI should have a national coverage with breakdowns by city, it is not justified that it only covers the Asuncion metropolitan area.
- The PPI could be based on a methodology with a more relevant sample.
- Government finance statistics lack information on public enterprises and decentralized agencies.
- The MOF does not provide the market with detailed information on tax revenue (for example income taxes by type of contributor and economic sector).
- Statistics on credit unions are unavailable (such as in the CBP bulletins).

Accuracy and Reliability

- Estimates of the informal sector activity are poorly measured in the official statistics and not transparent. Given the large size of the informal sector we should be able to access the methodologies applied to measure it.
- Data published by the MOF is inconsistent with the data published by the CBP. The coordination between the MOF and CBP should be improved, particularly on external debt statistics.
- Historical national accounts statistics and balance of payments statistics dating back several years are labeled as preliminary and open to revisions.
- There is a lack of communication regarding data revisions.
- Information on official websites is sometimes modified without an explanation, such as with the weighted average interest rates in financial statistics.
- Balance of payments statistics do not accurately capture cross-border trade and capital flows.

Serviceability

- The timeliness of the statistics on national accounts, government finance, and balance of payments should be improved.
- The statistics disseminated by the CBP are timely; however, the statistics disseminated by the MOF and other ministries are almost impossible to obtain on a timely basis.
- The Statistical Annex published by the CBP contains a wealth of information but ideally it should be disseminated with a shorter time lag.
- An advance release calendar with exact dates is missing for each of the statistical sectors, except CPI.

Accessibility

- Metadata (methodology and calculations) for government finance statistics is of poor quality.
- The CBP should release more documents explaining the methodologies applied in the official statistics.
- The description of the methodology, concepts and practices in most cases are not disseminated.
- Monetary statistics is good, but it is not disseminated in a time series format which makes inter-

temporal analysis difficult. The tables should somehow allow users to retrieve historical data.

- In other countries, an interactive online database is available for users to select economic time series, frequency, etc., which facilitates search and compilation. The CBP would benefit from a similar online database.
- On the CBP website, create a FAQ section. For CPI, release more detailed metadata containing information on the weights, the sample collection system, and the items included in the sample. For balance of payments statistics and national accounts statistics, information should be provided on the estimation techniques for the informal economy.
- Strengthen the dissemination via the internet and by e-mail of the statistics, publications, and documents produced not only by the CBP, but also by the MOF and the GDSSC.
- The official websites lack options to download raw data, such as into Excel.
- Our official source of statistics is the CBP website, which has evolved considerably in late 2013. We have some difficulties accessing fiscal statistics given that they are not consolidated, in particular data on revenue. It is difficult to find data on customs revenue and internal tax revenue.
- The CBP is very cooperative and kindly answers questions by users.

General Comments

- The improvements to official statistics should focus on facilitating/publishing information and economic/financial statistics with greater disaggregation, improving the timeliness of the data, and provide the methodologies applied.
- Economic projections should be more frequent and the methodology clearer and more easily available.
- In general, the timeliness of the information is very positive and the publications of the CBP are quite complete. However, one can highlight some deficiencies: the trade balance is lacking more realistic data (better estimates of informal trade); estimates of Paraguay's investment abroad are unavailable; disaggregated employment indices are unavailable; a national CPI is unavailable; detailed information on the sectoral composition of GDP is unavailable; and, medium and long-term projections of indicators are not available.
- The executive summary of *Informe Económico* should cover issues on fiscal policy and the real sector, as well as a greater number of statistics and trends.
- National accounts statistics should present data in greater detail, contain more information on the methodologies applied, and improve the timeliness of its publication.
- I would like to see published projections of GDP and inflation, for at least one year into the future. This information is important for the planning and projections of the private sector.
- Some statistical datasets, such as CPI, should be communicated more clearly and simply for interpretation by members of civil society.
- The economies of some parts of the country, in particular cities on the borders, have experienced dramatic changes and the CPI is not picking this up because of its geographical coverage.
- Statistics on poverty should be refined. Moreover, poverty indicators are unavailable at a district level.
- An agricultural census should be conducted. Information and detail is needed on the current economic developments in the agricultural and cattle ranching sectors.

Source: Users' survey of Paraguay's macroeconomic statistics.