

**Botswana: Report on the Observance of Standards and Codes—
Data Module, Response by the Authorities, and Detailed Assessment Using the
Data Quality Assessment Framework (DQAF)**

This Report on the Observance of Standards and Codes on Data Module for Botswana 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 March 27, 2007. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Botswana 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.

The policy of publication of staff reports and other documents by the IMF allows for the deletion of market-sensitive information.

To assist the IMF in evaluating the publication policy, reader comments are invited and may be sent by e-mail to publicationpolicy@imf.org.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
700 19th Street, N.W. • Washington, D.C. 20431
Telephone: (202) 623 7430 • Telefax: (202) 623 7201
E-mail: publications@imf.org • Internet: <http://www.imf.org>

Price: \$18.00 a copy

**International Monetary Fund
Washington, D.C.**

INTERNATIONAL MONETARY FUND

BOTSWANA

Report on the Observance of Standards and Codes (ROSC)—Data Module

Prepared by the Statistics Department

Approved by Robert W. Edwards and Abdoulaye Bio-Tchané

March 27, 2007

The Report on the Observance of Standards and Codes (ROSC)—Data Module provides an assessment of Botswana'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), July 2003. The DQAF lays out internationally accepted practices in statistics, ranging from good governance in data-producing agencies to practices specific to datasets.

The datasets covered in this report are national accounts, consumer and wholesale price indices, government finance, monetary, and balance of payments statistics. The agencies that compile the datasets assessed in this report are the Central Statistics Office (CSO), Ministry of Finance and Development Planning (MFDP), and Bank of Botswana (BoB).

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

CSO:	http://www.cso.gov.bw
MFDP:	http://www.gov.bw
BoB:	http://www.bankofbotswana.bw

This report is based on information provided prior to and during a staff mission from October 31–November 13, 2006 and publicly available information. The mission team comprised Mr. William E. Alexander, Mmes. Candida Andrade and Shelley Winston, Messrs. Alberto Jiménez de Lucio and Jens Reinke (all Statistics Department, IMF), David Hughes (Expert), and Ms. Lourdes Horton (Senior Administrative Assistant).

Contents

Page

Acronyms.....	3
I. Overall Assessment.....	4
II. Assessment by Agency and Dataset	7
III. Staff's Recommendations	18
Tables	
1. DQAF, July 2003—Summary Results.....	8
2a. Assessment of Data Quality—Dimensions 0 and 1—Central Statistics Office	9
2b. Assessment of Data Quality—Dimensions 0 and 1—Ministry of Finance and Development Planning.....	10
2c. Assessment of Data Quality—Dimensions 0 and 1—Bank of Botswana	11
3a. Assessment of Data Quality—Dimensions 2 to 5—National Accounts.....	12
3b. Assessment of Data Quality—Dimensions 2 to 5—Consumer Price Index.....	13
3c. Assessment of Data Quality—Dimensions 2 to 5—Producer Price Index.....	14
3d. Assessment of Data Quality—Dimensions 2 to 5—Government Finance Statistics	15
3e. Assessment of Data Quality—Dimensions 2 to 5—Monetary Statistics.....	16
3f. Assessment of Data Quality—Dimensions 2 to 5—Balance of Payments Statistics	17
Appendix Table	
4. Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Macroeconomic Data Compared to the General Data Dissemination System	21

ACRONYMS

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
BoB	Bank of Botswana
<i>BPM5</i>	<i>Balance of Payments Manual, fifth edition</i>
COICOP	Classification of Individual Consumption by Purpose
CPI	Consumer price index
<i>CPI Manual</i>	<i>Consumer Price Index Manual 2004</i>
CSO	Central Statistics Office
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
GABS	Government Accounting and Budgeting System
GDDS	General Data Dissemination System
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>
HIES	Household Income and Expenditure Survey
ITRS	International Transactions Reporting System
MFDP	Ministry of Finance and Development Planning
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual, 2000</i>
MLG	Ministry of Local Government
<i>Reserves Template</i>	<i>International Reserves and Foreign Currency Liquidity Template</i>
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
WPI	Wholesale price index

I. OVERALL ASSESSMENT

1. Botswana began participating in the General Data Dissemination System (GDDS) and started posting its metadata (including plans for improvement) on the Dissemination Standards Bulletin Board (DSBB) in October 2002. Appendix Table 4 provides an overview of Botswana's dissemination practices compared to the GDDS.

2a. The Report on the Observance of Standards and Codes (ROSC)—Data Module contains the following main observations. Botswana has a macroeconomic statistical system that does not yet fully meet the needs of its policymakers and other data users. Botswana first undertook a ROSC data module assessment in October 2001, and it has used both the ROSC assessment and the GDDS detailed plans for improvement to guide the development of its capacity in the production of macroeconomic statistics. In the interval since the last assessment, there has been a strengthening of the relevance of the data (especially with regard to the responsiveness to users' needs), the transparency of statistical policies and practices, the accessibility of data and metadata, and, on balance, some progress in the methodological framework that underpins the system. Staff of the statistical agencies exhibit a high level of professionalism and ethical standards. Overall, Botswana has a solid basis on which to prepare for the next stage in its statistical development, namely subscription to the more exacting requirements of the Special Data Dissemination Standard (SDDS).

2b. Indeed, there could be substantial benefits to Botswana from an early subscription to the SDDS, particularly as the economy continues to grow and evolve at a pace that risks outrunning the capacity of the statistical system to meet the needs of policymakers and other data users. However, Botswana would need to make a marked improvement in the periodicity and timeliness of its data in many areas in order to meet the standard. As well, it would need to begin compiling and disseminating certain statistics that are requirements for the SDDS, for example, statistics on general government, the *International Reserves and Foreign Currency Liquidity Template* (the *Reserves Template*), and key statistics on production and producer prices. Meeting these challenges would require high-level policy decisions to increase staff resources in the main statistics-producing agencies in a concerted and coordinated way, and to accept the high level of transparency regarding Botswana's international reserves position that the *Reserves Template* requires.

2c. Improving the periodicity and timeliness of statistics should be an important goal, regardless of whether or not Botswana decides to subscribe to the SDDS; this will require more willingness to publish preliminary data—backed up by coherent and transparent revision policies and practices—than is the case at present. Other important goals should include strengthening source data and enhancing the domestic availability of metadata.

2d. Section II provides a summary assessment by agency and dataset based on a four-part scale. This is followed by staff recommendations in Section III. Practices compared to the

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

3. In applying the IMF's Data Quality Assessment Framework (DQAF), July 2003, the remainder of this section presents the mission's main conclusions. The presentation is done at the level of the DQAF's quality dimensions, by agency for the first two dimensions and across datasets for the remaining four.

4. With regard to **prerequisites of quality**, various laws and decrees authorize the Central Statistics Office (CSO), the Ministry of Finance and Development Planning (MFDP), and the Bank of Botswana (BoB) to collect, compile, and disseminate the relevant statistics. However, the legal framework does not provide an explicit mandate to BoB for compiling balance of payments statistics, or to the MFDP for disseminating fiscal statistics to the general public. In practice, responsibilities do not overlap, but cooperation among the agencies through informal agreement could be improved. While facilities and computing resources are broadly commensurate with the statistical program, the CSO and MFDP are seriously understaffed. This understaffing has adverse consequences for their ability to adequately perform the tasks required to produce the needed full range of national accounts, prices, and government finance statistics (GFS) in a timely way, let alone extend and further develop their statistical systems. All agencies have increased their efforts to monitor the overall quality of the statistical program and ensure that statistics remain relevant to users' needs. They could, however, give more attention to the quality versus timeliness trade-off in their design and review of work programs, and place relatively more emphasis on timeliness. As to **assurances of integrity**, a combination of legislation and tradition supports the compilation and collection of statistics on an impartial basis. In all agencies, a culture of professionalism and objectivity is promoted and supported. The terms and conditions under which macroeconomic statistics are produced and disseminated are publicly available. However, there can be internal governmental access to all macroeconomic data except consumer and wholesale prices, prior to their public release, which is not always explicitly identified in domestic information sources. Staff of all of the statistics-producing agencies are held to a high ethical standard in the conduct of their work.

5. Concepts and definitions, with the notable exception of those underpinning the wholesale price index (WPI) and local government statistics, are in general **methodologically sound**, and broadly conform to internationally accepted standards. Monetary statistics follow the *Monetary and Financial Statistics Manual (MFSM)*. Balance of payments statistics conform to the *Balance of Payments Manual*, fifth edition (*BPM5*). Some changes are still needed to bring the national accounts fully into line with the *System of National Accounts 1993 (1993 SNA)*. The GFS other than for local government generally conform to *A Manual of Government Finance Statistics, 1986 (GFSM 1986)*, while the consumer price index (CPI) conforms to the *Consumer Price Index Manual 2004 (CPI Manual)*. Methodological problems, as well as issues of inadequate scope and faulty

sectorization, seriously undermine the usefulness of the WPI. The institutional scope of the GFS does not extend to extrabudgetary institutions, consolidated central government, or consolidated general government. The scope of the remaining datasets is broadly in line with international standards with some relatively minor deviations. Sectorization and classification of data are generally sound, although there are problems in the national accounts data, which still mostly follow the classifications and sector breakdowns in the *System of National Accounts 1968 (1968 SNA)*, and in GFS. The basis for recording generally follows the latest international guidelines.

6. The **accuracy and reliability** of macroeconomic statistics could be strengthened through reliance on better and more timely source data. For instance, data sourcing for balance of payments statistics could depend less on the International Transactions Reporting System (ITRS) with more recourse to alternative (principally survey) sources; the frequency of the main enterprise survey that underpins national accounts data could be increased; more detail is needed in the source data for monetary statistics, and the timeliness of BoB data should be increased sharply; the data used for compiling annual statistics for local government should be considerably more timely; and coverage for the WPI could be expanded. The techniques used to assess source data typically are sound. The agencies generally employ suitable statistical techniques in their operations, although the BoB could usefully strengthen its methods used for estimating missing data, adjusting import values, and estimating flows from stock data in the balance of payments statistics. Sound methods are generally used for assessing and validating intermediate data. Generally speaking, more—and more systematic—internal use could be made of revision studies to inform and strengthen statistical processes.

7. As to **serviceability**, datasets generally meet GDDS recommendations for periodicity, but fall short of the GDDS recommendations for timeliness in the case of government fiscal statistics and monetary statistics (the exception is the WPI, which meets neither of the recommendations). Datasets are mostly consistent within themselves and consistent over time; however, some inconsistencies are not reconciled among the datasets, for example, between balance of payments and national accounts statistics, and between government finance and monetary statistics. Revision policies and practices vary from dataset to dataset, but all would benefit from a more formalized approach, including conducting and publishing revision studies. Revised data are clearly identified.

8. The statistical agencies utilize their websites and publications to provide **access** to data and metadata. Data generally are clearly presented with a combination of charts and tables, and with a sufficient level of detail and historical information. More attention could be given to the use of advance release calendars, which should include projected release dates. Moreover, additional measures could be taken to facilitate access to metadata. In the case of government finance, monetary, and balance of payments statistics, metadata are available only from the IMF's DSBB website. While the CSO does provide some brief methodological

information in its publications and does make users aware of the DSBB source, it could also provide a link to it. The MFDP and BoB provide links to the DSBB on their websites, although the links are not particularly visible and are not associated directly with the data disseminated. The statistical agencies generally provide useful information—either on their website and/or in their publications—on contact persons for special assistance and queries.

II. ASSESSMENT BY AGENCY AND DATASET

9. Assessment of the quality of six macroeconomic datasets—national accounts, consumer price index, wholesale price index, government finance, monetary, and balance of payments statistics—was conducted using the DQAF, July 2003. 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 the assurance of integrity (Dimensions “0” and “1” of the DQAF) are presented in Tables 2a–c. For each dataset, the assessment of methodological soundness, accuracy and reliability, serviceability, accessibility (Dimensions “2” to “5” of the DQAF) are shown in Tables 3a–f.

Table 1. Botswana: Data Quality Assessment Framework, July 2003—Summary Results

Key to symbols: O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; NA = Not Applicable		National Accounts	Consumer Price Index	Wholesale Price Index	Government Finance Statistics	Monetary Statistics	Balance of Payments Statistics
Datasets							
Dimensions/Elements							
0. Prerequisites of quality							
0.1	Legal and institutional environment	O	O	O	LO	O	LO
0.2	Resources	LO	LO	LNO	LO	LO	LO
0.3	Relevance	O	O	O	LO	O	O
0.4	Other quality management	LO	LO	LO	LO	LO	LO
1. Assurances of integrity							
1.1	Professionalism	O	O	O	O	O	O
1.2	Transparency	LO	O	O	LO	LO	LO
1.3	Ethical standards	O	O	O	O	O	O
2. Methodological soundness							
2.1	Concepts and definitions	LO	O	LNO	LO	O	O
2.2	Scope	LO	LO	LNO	LNO	O	O
2.3	Classification/sectorization	LNO	O	LNO	LNO	LO	O
2.4	Basis for recording	LO	O	LO	LO	O	LO
3. Accuracy and reliability							
3.1	Source data	LO	LO	LNO	LO	LNO	LO
3.2	Assessment of source data	LO	LO	LO	O	O	LO
3.3	Statistical techniques	LNO	LO	LO	LO	LO	LNO
3.4	Assessment and validation of intermediate data and statistical outputs	LO	LO	LO	LO	LO	O
3.5	Revision studies	LO	O	O	LNO	LO	LO
4. Serviceability							
4.1	Periodicity and timeliness	O	O	LNO	LO	LO	O
4.2	Consistency	LO	O	LO	LO	LO	LO
4.3	Revision policy and practice	LNO	LO	LO	LO	LO	LNO
5. Accessibility							
5.1	Data accessibility	LO	LO	LO	LO	O	LO
5.2	Metadata accessibility	LO	LO	LNO	LO	LO	LO
5.3	Assistance to users	O	O	O	LO	O	O

Practice observed: current practices generally in observance 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.

Table 2a. Botswana: Assessment of Data Quality—Dimensions 0 and 1—Central Statistics Office

<p>0. Prerequisites of quality</p> <p>Legal and institutional environment The <i>Statistics Act</i> (1967) (the <i>Statistics Act</i>) gives the CSO a strong legal basis for compiling and disseminating national accounts and price statistics. Data sharing and coordination procedures with other government agencies could be improved. Confidentiality of respondents' data is guaranteed under the <i>Statistics Act</i>. The CSO has effective procedures for protecting and disposing of respondents' data. The <i>Statistics Act</i> specifies penalties for respondents who do not supply relevant data. However, the CSO prefers to use persuasion in such cases.</p> <p>Resources The number of staff is not sufficient for the established work program, and is particularly acute for the WPI. Computer resources are sufficient to meet the needs of the statistical systems. Staff are well trained, but turnover is a problem. The existing accommodation is broadly adequate. All staff undergo an annual performance review, and there are periodic staff perception surveys.</p> <p>Relevance A group of users for each subject field is consulted as and when required. The CSO is active internationally, taking part in as many meetings and seminars as possible, particularly within the Southern African Development Community (SADC).</p> <p>Other quality management Management is committed to data quality and cascades this down through the ranks. As part of this process, the CSO has a vision and mission statement, promoted throughout the office. Management monitors the quality of data through supervisory and computer checks. However, there are no reviews of work programs. Consideration is given always to the trade-off between accuracy and timeliness.</p>	<p>1. Assurances of integrity</p> <p>Professionalism The <i>Statistics Act</i> established the professional independence of the CSO. The CSO actively promotes and supports professionalism. For instance, recruitment is through open competition, and based on ability and expertise. All staff receive internal on-the-job training in relevant subjects. They also take every opportunity to attend international courses and seminars. The CSO encourages staff members to write and publish methodological articles in the MFDP newsletter. The CSO is free to choose whatever it considers are appropriate data sources and methodologies. It also decides on the method and timing of data dissemination. When statistics are subject to erroneous interpretation, it takes appropriate corrective action.</p> <p>Transparency The <i>Statistics Act</i> is available to the public on the CSO's website, on the DSBB, and in publications of the laws of Botswana. All statistical publications identify where more information about the CSO and its products can be found. Only partial details on internal government prerelease access to national accounts data are given on the DSBB, and nothing at all is shown on the CSO's website. All CSO publications display its logo. Other agencies, that display CSO datasets in their own publications are required to show the CSO as the source. Advance notice of major changes is given to a reference group of major users.</p> <p>Ethical standards The <i>Statistics Act</i> contains clear guidelines for staff behavior. All persons, including non-CSO staff, working on subjects covered by the <i>Statistics Act</i> are required to sign a declaration of secrecy. Staff are also subject to the civil service regulations contained in the <i>Public Service Charter</i> published in 1996.</p>
--	---

Table 2b. Botswana: Assessment of Data Quality—Dimensions 0 and 1—Ministry of Finance and Development Planning

<p>0. Prerequisites of quality</p> <p>Legal and institutional environment The responsibility for collecting, processing, and reporting fiscal statistics is clearly assigned to the minister of the MFDP by the <i>Finance and Audit Act</i>. The law mandates the minister to report on the budget to parliament, but it does not establish an obligation to disseminate statistics to the general public. Most of the source data for the compilation of fiscal statistics are generated within the MFDP, through the Government Accounting and Budgeting System (GABS).</p> <p>The Ministry of Local Government (MLG) is responsible for collecting, processing, and disseminating information on the finances of local authorities. The <i>Statistics Act</i> sets the rules governing the collection, processing, and dissemination of statistics. It protects the confidentiality of data reported by individual persons and entities, and establishes that information should be presented in such manner that no individual particulars are disclosed. The flow of information at the technical level could be improved among data-producing agencies.</p> <p>Resources Although sufficient resources are allocated to computing technology, the number of staff are insufficient to adequately perform the tasks associated with the compilation and dissemination of GFS.</p> <p>The introduction of GABS in September 2004 represents a major step forward in the availability of comprehensive and timely information for the compilation of fiscal statistics. The computerization program for local authorities is significantly behind schedule and faces serious problems.</p> <p>Relevance Current fiscal statistics are mainly geared toward compliance with existing legislation and regulations. The needs of the general public do not receive particular attention.</p> <p>Other quality management Management recognizes the importance of quality, as reflected by the introduction of a Performance Management System and the GABS. A better balance between accuracy and timeliness is needed. Increased recognition needs to be given to incorporating international best practice, such as the <i>Government Finance Statistics Manual 2001 (GFSM 2001)</i>, into the statistical program.</p>	<p>1. Assurances of integrity</p> <p>Professionalism The <i>Finance and Audit Act</i> and the <i>Statistics Act</i> both support the compilation of fiscal statistics on an impartial basis, although there is no explicit section on professional independence. However, a culture of professionalism is adhered to, and no outside interference with statistical results is permitted.</p> <p>Recruitment is conducted through a competitive process based on the qualifications for the position being filled. Processes and activities in the workplace generally promote a culture of professionalism.</p> <p>The choice of source data and statistical techniques is based exclusively on data and processing requirements. High-level political support would be required to undertake the activities needed to meet the requirements of the SDDS or adopt the new international guidelines for the compilation of GFS.</p> <p>Decisions to disseminate data are based mainly on legal obligation and not statistical considerations. The MFDP staff can provide expert advice on technical aspects of fiscal statistics.</p> <p>Transparency The legislation that establishes the terms and conditions under which statistics are compiled and disseminated is publicly available. The MFDP makes available fiscal statistics to senior officers and other units of the corresponding ministry for review and internal information prior to their general dissemination. Furthermore, both the BoB and the CSO have access to the data before its publication. This internal access is not made public.</p> <p>The MFDP clearly identifies the identity of the agency responsible for compiling the data released to the public. Major changes in methodology and source data are usually contained in legislation or are announced when the changes are introduced.</p> <p>Ethical standards The <i>Statistics Act</i> establishes sanctions for public servants for improper behavior in the discharge of their functions. It also establishes that any person employed in the execution of the <i>Act</i> must make and subscribe to an oath of affirmation. The <i>Public Service Charter</i> sets out the basic principles by which public servants are guided.</p>
---	--

Table 2c. Botswana: Assessment of Data Quality—Dimensions 0 and 1—Bank of Botswana

<p>0. Prerequisites of quality</p> <p>Legal and institutional environment Under the <i>Bank of Botswana Act, 1996</i>, the BoB compiles and disseminates monetary and balance of payments statistics. There is no explicit legal mandate for compiling and disseminating balance of payments statistics, but there is an informal agreement between relevant government entities. The mandate is clear in the case of monetary statistics. Reporting is mandatory, and the BoB can take enforcement actions but prefers moral suasion. Existing regulations safeguard the confidentiality of individual reporters' data and impose penalties on those who might disclose these data. However, unit data are published in some cases since the small size of the economy makes aggregation ineffective. Data-sharing arrangements are in place within the BoB and between the BoB and other government agencies, but they do not always work effectively.</p> <p>Resources Staff resources are adequate to compile monetary and balance of payments statistics, although a reallocation of staff within the balance of payments division would be desirable. Staff have attended in-house training activities and training courses organized by the IMF, but further training remains important, particularly with regard to monetary statistics compilers. Compilation processes are largely computerized, with the exception of data entry. Computer systems would benefit from being updated more regularly.</p> <p>Relevance There are close links with data users, both in the government and the private sector, which provide ample feedback and help to monitor users' needs. Staff members participate in statistical meetings and seminars organized by international and regional organizations. The BoB encourages users' feedback through the publication of the telephone number and e-mail address of the staff responsible for each dataset.</p> <p>Other quality management The BoB's culture emphasizes accuracy more than the other dimensions of quality, in particular, timeliness. The emphasis on accuracy causes excessively long delays in disseminating BoB data. The BoB could give more emphasis to more timeliness and periodicity in planning its statistical program.</p>	<p>1. Assurances of integrity</p> <p>Professionalism Although no law or formal provision supports professional independence, the culture of professionalism is strongly recognized and embedded in the reporting arrangements and compilation procedures in place. The compiling staff of the BoB asserts that the quality of the compilation has never been negatively affected by external pressures. Data sources are selected on the basis of availability, data accuracy, completeness, and timeliness, as well as practicality and resource availability. The selection of statistical techniques is informed by the knowledge and experience of compiling staff, advice received from various technical assistance projects, and practical considerations.</p> <p>Transparency The terms and conditions under which monetary and balance of payments statistics are collected, processed, and disseminated are outlined in GDDS metadata, which are posted on the DSBB website of the IMF. The BoB website provides a direct link to the DSBB website. Internal governmental access to statistics prior to their release is partially identified in metadata posted on the DSBB website. The BoB clearly identifies its statistics publications with its name, logo, and insignia. Users are informed of changes in methodology of the monetary and balance of payments statistics only when these data are released; moreover, methodological changes in the balance of payments statistics are not indicated in the tables.</p> <p>Ethical standards The BoB informs new staff about the General Conditions of Service and requires them to sign off on them. The conditions include restrictions on political activities of staff, commitments to confidentiality and professionalism, financial disclosure, and avoidance of conflicts of interest. These conditions are rigorously enforced. The BoB communicates to all staff on a regular basis any changes in the conditions, as well as enforcement actions. Culture and management practices at the BoB enforce the ethical standards effectively. Employees are fully aware of these guidelines since they are also listed in the conditions of service.</p>
--	--

Table 3a. Botswana: Assessment of Data Quality—Dimensions 2 to 5—National Accounts

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions The national accounts are principally based on the 1993 <i>SNA</i>. However, some changes still are needed to bring them fully into line with the 1993 <i>SNA</i>.</p> <p>Scope The published data include annual GDP, from both the production and expenditure approaches at current and constant prices. Sector accounts in line with the 1968 <i>SNA</i> are published, but only down to the capital account, not covering the financial account. Quarterly GDP, from both the production and expenditure approaches at current and constant prices, are published.</p> <p>Classification/sectorization The classifications and sector breakdowns are still broadly in line with the 1968 <i>SNA</i>. Also, taxes on products include some amounts, possibly significant, which actually relate to other countries.</p> <p>Basis for recording Most valuation rules are in line with the 1993 <i>SNA</i>. However, imports are valued c.i.f., rather than f.o.b. The new enterprise survey forms are potentially misleading in their treatment of taxes on products. All government figures are on a cash, not an accrual, basis.</p>	<p>Source data The main enterprise survey collecting annual data is only conducted every 10 years. Some data do not fully meet the requirements of the national accounts. Timeliness is a problem for the enterprise surveys due to poor response.</p> <p>Assessment of source data Source data are checked as far as possible. However, no information is collected on nonsampling errors or rates of nonresponse.</p> <p>Statistical techniques There are a number of weaknesses with the statistical techniques used to compile the national accounts, the most significant being that the methodology used to put together the 1994/95 benchmark estimates is not known to the existing staff. No estimates are made for informal activities. The base year for the volume estimates is still 1993/94. Arbitrary values have been included in the series for errors and omissions for some years. The figures for changes in inventories are not adjusted for holding gains/losses. The quarterly GDP estimates are not seasonally adjusted.</p> <p>Assessment and validation of intermediate data and statistical outputs Assessment and validation is done wherever possible, but no established procedure exists for checking for discrepancies in intermediate data.</p> <p>Revision studies Revisions to individual values are investigated, but there are no formal revision studies.</p>	<p>Periodicity and timeliness Annual national accounts are published following the GDDS recommendation. The first set of annual estimates is published eight months after the reference period, which also follows the GDDS recommendations.</p> <p>Consistency The expenditure figures for GDP are not derived independently, except for benchmark years. Consequently, consistency is achieved by way of a residual series. There are some inconsistencies with data from other agencies.</p> <p>Revision policy and practice There is no formal revision policy. Published data are clearly marked as provisional. No information on the investigation of revisions is published.</p>	<p>Data accessibility The published data for the national accounts are disseminated at a detailed level, with a time series of up to 21 years for the main aggregates. The publications contain analyses of the figures, incorporating charts and diagrams. The actual release dates are not specified on the CSO's calendar. The availability of unpublished data is not publicized.</p> <p>Metadata accessibility Only a relatively short methodological guide is included in each publication. Neither is it included on the CSO's website nor is there a link to the metadata on DSBB.</p> <p>Assistance to users Contact persons are named in each publication. Every publication also contains a list of recent and forthcoming publications.</p>

Table 3b. Botswana: Assessment of Data Quality—Dimensions 2 to 5—Consumer Price Index

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions Concepts and definitions, which have been developed locally, are broadly in line with international standards, guidelines, or good practices. Household expenditure estimates from the Household Income and Expenditure Survey (HIES) are used for the weights of market expenditure on goods and services. The old CPI is based on a domestic classification with product breakdown. The new rebased CPI is classified according to the Classification of Individual Consumption by Purpose (COICOP), which conforms to the guidelines of the 1993 <i>SNA</i> and the <i>CPI Manual</i>.</p> <p>Scope All resident households, regardless of income, are included in the CPI. Scope broadly conforms to international standards, with the main exception being owner-occupied housing, which is not included in the CPI.</p> <p>Classification/sectorization The CPI covers noninstitutionalized Botswana households that are consistent with the 1993 <i>SNA</i> household sector. The item weights for the new CPI are classified using the COICOP that is consistent with international guidelines, while the old CPI with product breakdown was based on a domestic classification.</p> <p>Basis for recording The prices reflect those that a consumer would pay on the day of the survey, including value added tax, excise taxes, trade, and transportation margins.</p>	<p>Source data The outlets for price reading purposes were derived from the Business Register according to the market share of each outlet. Misclassifications tend to be problematic. Ad hoc surveys are not conducted to identify new products and provide source data for weights and prices. The value of consumption of owner-occupied housing and expenditure on services of illegal market products are excluded.</p> <p>Assessment of source data Adjustments were made for underreporting of specific products such as alcohol and tobacco using imports data. However, administrative data like data on imports are not routinely assessed and validated.</p> <p>Statistical techniques The old CPI is derived by taking the average of the long-term price relative of the relevant price quotation. The new CPI is derived by taking short-term price relatives. Aggregates for the old index are obtained using the Laspeyres formula, while the new index is based on the modified Laspeyres formula. Imputations for missing prices are conducted, but adjustments for quality need improvement.</p> <p>Assessment and validation of intermediate data and statistical outputs The CPI data are not regularly compared to other price index series such as the WPI since the WPI is compiled and disseminated infrequently.</p> <p>Revision studies The CPI is considered final when released. Studies and analyses of the weight revisions are carried out when there is a new HIES and methodological changes, and are used internally to inform statistical processes.</p>	<p>Periodicity and timeliness Botswana meets the periodicity and timeliness recommendations and standards of both the GDDS and SDDS.</p> <p>Consistency The CPI aggregation structure is consistent from the cell level to the item level, the item level to the group level, and the group level indices to higher levels of expenditure classes and the all-item level.</p> <p>Revision policy and practice The CPI is considered final when released. However, there have been some occasions when revisions occurred. Users were not immediately provided with adequate explanation. Whenever there are weight revisions, users are informed about the process via the Internet, press release, and conferences.</p>	<p>Data accessibility The CSO publishes well-designed charts and tables to facilitate analysis. Data for the CPI are generally accessible, and the datasets are published with various levels of disaggregation.</p> <p>An advance release calendar is posted on the CSO's website, but no release dates for the upcoming year are indicated; only the months in which data compiled by the CSO will be disseminated are listed.</p> <p>Metadata accessibility Documentation on concepts, scope, classification, data sources, and methods of the CPI are available on the DSBB. There are, however, no CPI methodological notes on the CSO's website or a link to the DSBB metadata. The CSO website, however, does provide a full description of the DSBB website that mentions several of Botswana's data categories metadata.</p> <p>Assistance to users All publications give the name, telephone, facsimile, and email of the CPI staff who is available to provide assistance to users.</p>

Table 3c. Botswana: Assessment of Data Quality—Dimensions 2 to 5—Wholesale Price Index

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions The price concept for the survey is the market price or purchasers' price, including value-added tax and excluding product subsidies. Therefore, the WPI does not follow the 1993 SNA concept of output valuation.</p> <p>Scope The WPI of industrial output for the domestic economy of Botswana measures the development in wholesale prices for six product groups, which include food, alcohol and tobacco, building materials and consumables, health and personal care, and other goods. Mining, some manufacturing, quarrying, and even construction industries are not included. The products covered in the WPI are not representative of the industrial production of Botswana.</p> <p>Classification/sectorization The classification system used for the WPI is not consistent with internationally accepted standards, guidelines, or good practice. Botswana's WPI is classified according to the COICOP.</p> <p>Basis for recording The prices reflect those that a consumer would pay on the day of the survey, including wholesale prices with taxes, transportation, freight, and margins, and not basic prices as required.</p>	<p>Source data The wholesale outlets for price reading purposes were derived from the Business Register according to the market share of each outlet. The wholesale outlets covered are not representative of the entire population. Weights used in the 1997 WPI series were derived from the 1993/04 HIES results.</p> <p>Assessment of source data Adjustments were made for underreporting of specific products, such as alcohol and tobacco, using imports data. However, administrative data like data on imports are not routinely assessed and validated.</p> <p>Statistical techniques The WPI is derived by taking the average of the long-term price relative of the relevant price quotation. Aggregates for the index are obtained using the Laspeyres formula. The weight and price reference period for the index is the same (1997). The 1993/04 weights were price updated. Imputations for missing prices are conducted, but adjustments for quality need improvement.</p> <p>Assessment and validation of intermediate data and statistical outputs The WPI data are not regularly compared to other price index series such as the CPI since the WPI is compiled and disseminated infrequently.</p> <p>Revision studies The WPI is considered final when released. The WPI basket and weights are updated when there is a new HIES. Revisions are not conducted once the index is released. However, studies and analyses of the weight revisions are carried out when there is a new HIES, and are used internally to inform statistical processes.</p>	<p>Periodicity and timeliness Botswana does not meet the periodicity and timeliness recommendations for the GDDS.</p> <p>Consistency The WPI aggregation structure is consistent from the cell level to the item level, the item level to the group level, and the group level indices to higher levels of expenditure classes and the all-item level. The PPI is available from September 1997. Since 2001, the compilation of the PPI was halted. For methodological reasons, these two indices cannot be linked.</p> <p>Revision policy and practice Since the WPI data are final when first published, there are no revisions. On a regular basis, for the weight revisions, no studies or methodological notes are produced and made public.</p>	<p>Data accessibility The CSO publishes well-designed charts and tables to facilitate analysis. Data for the WPI are generally accessible, and the datasets are published with various levels of disaggregation.</p> <p>An advance release calendar is posted on the CSO's website, but no release dates for the upcoming year are indicated; only the months in which data compiled by the CSO will be disseminated are listed.</p> <p>Metadata accessibility Documentation on concepts, scope, classification, data sources, and methods of the WPI are not available either on the CSO's website or on the DSBB. There is no technical guide on the WPI.</p> <p>Assistance to users All publications provide the name, telephone, facsimile, and email of the WPI staff who is available to provide assistance to users.</p>

Table 3d. Botswana: Assessment of Data Quality—Dimensions 2 to 5—Government Finance Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions The concepts and definitions used to compile GFS generally follow the guidelines of the <i>GFSM 1986</i> for the budgetary central government, but not for local governments. No decision has been taken by the authorities on adopting a “migration path” to the <i>GFSM 2001</i> methodology.</p> <p>Scope No fiscal statistics are compiled for extrabudgetary institutions, consolidated central government, and consolidated general government. The transaction coverage generally follows the <i>GFSM 1986</i>.</p> <p>Classification/sectorization The classifications used for the operations of budgetary central government follow partially the concepts and definitions of the <i>GFSM 1986</i>, while those used for local governments do not.</p> <p>Basis for recording Transactions are recorded on a cash basis, consistent with the <i>GFSM 1986</i> guidelines. Gross debt is valued at face value. However, financing and corrective transactions are not presented net.</p>	<p>Source data Data sources are complete to allow the compilation of GFS for the budgetary central government. The GABS provides comprehensive and timely accounting records, allowing customized reports to be generated automatically.</p> <p>However, the data used for compiling annual GFS for local governments are not timely.</p> <p>Adjustments to annual data are all assigned to March and not to the month the transaction took place.</p> <p>Assessment of source data The GABS uses financial software that incorporates extensive built-in controls. Validation procedures are also in place to ensure data accuracy. In addition, the auditor-general audits the annual accounts before they are released.</p> <p>Statistical techniques Accepted statistical practices are used to deal with data sources.</p> <p>Assessment and validation of intermediate data and statistical outputs Intermediate results are checked against other data. Fiscal data discrepancies among national compilers on particular items are not regularly reconciled.</p> <p>Revision studies Only the data for a single year are revised. All other subannual and annual data are final when first published. No revision studies are routinely conducted.</p>	<p>Periodicity and timeliness The periodicity of fiscal statistics meets the GDDS standard. The timeliness of fiscal statistics does not meet the GDDS recommendation, which requires dissemination of central government budgetary operations within one quarter, and dissemination of central government debt within two quarters. It should be noted that information is available to compile and disseminate fiscal statistics within a timeframe that would easily meet the GDDS recommendation.</p> <p>Consistency The concepts, definitions, and classifications for producing subannual and annual fiscal statistics by the MFDP are the same.</p> <p>Consistent time series are available for an adequate period of time. Commentaries are not included in the publications, but the budget speech discusses highlights of recent developments. Fiscal statistics are not reconciled with data from the other data-producing agencies.</p> <p>Revision policy and practice The revision cycle is regular and known by users. Revised data are clearly identified in all publications of the MFDP and BoB. No revision studies are published.</p>	<p>Data accessibility The GFS statistics disseminated in the MFDP, BoB, and MLG publications are presented in a clear manner. However, the introduction of charts and commentaries would facilitate analysis. Deviations from international standards are not identified in the publications.</p> <p>The MFDP and MLG publications are only available in hard copy, while the BoB publications are also available on the bank’s Internet website. All publications are released according to a regular, although not preannounced, schedule. The publications are made available to all users simultaneously and without preferential treatment of selected users. Statistics not routinely disseminated are sometimes made available.</p> <p>Metadata accessibility No metadata for GFS are published domestically. The only available information appears on the DSBB, to which the MFDP has a link on its website. However, the link is not readily visible.</p> <p>Assistance to users Contact persons and details for each subject field are publicized in the metadata on the DSBB. In general, limited assistance is provided to general public users of GFS.</p>

Table 3e. Botswana: Assessment of Data Quality—Dimensions 2 to 5—Monetary Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions Botswana's monetary statistics are broadly consistent with the <i>MFSM</i> recommendations.</p> <p>Scope The depository corporations survey covers the BoB and all the other institutions that issue liabilities included in the national definition of broad money, as recommended in the <i>MFSM</i>.</p> <p>Classification/sectorization In principle, classification and sectorization follow the <i>MFSM</i> guidelines, except for the classification of financial derivatives, which are classified off-balance sheet. Some nonbudgetary central government units are classified as nonfinancial public corporations. Accrued interest is not consistently presented together with the underlying instrument.</p> <p>Basis for recording The accounts of the depository corporations are recorded on an accrual basis. Valuation principles are used in conformity with the <i>MFSM</i>, except for holdings of held-to-maturity securities, recorded at amortized cost. Fixed assets are presented net of depreciation, but data on a gross basis are available.</p>	<p>Source data The source data do not provide the details needed as specified in the <i>MFSM</i>. The collection program relies fully on a hard copy-based reporting system. The BoB's accounting data are not made available to compilers on a timely basis.</p> <p>Assessment of source data Source data are routinely analyzed for accuracy, and assessment procedures are sound.</p> <p>Statistical techniques Monetary statistics are based on accounting data, and they do not, by and large, use statistical techniques. There is no estimation of market values of financial instruments recorded at cost.</p> <p>Assessment and validation of intermediate data and statistical outputs Statistical discrepancies and other problems are investigated and acted upon. Limited routine cross-checking against other datasets, such as the GFS, is performed.</p> <p>Revision studies No formal revision studies are carried out. However, revisions are infrequent and when they occur, they are reviewed and appropriate action is taken to eliminate the source of errors.</p>	<p>Periodicity and timeliness The GDDS recommendations for the monetary statistics do not meet the GDDS recommendations.</p> <p>Consistency Internal consistency in monetary statistics is ensured by routinely checking the data on interbank positions and by maintaining consistent time series, generally over a 10-year period.</p> <p>There are no significant discrepancies with the other datasets, although routine consistency checks are not undertaken.</p> <p>Revision policy and practice The informal policy to publish only final data is not clearly stated. Revisions are very infrequent and, when they occur, the reasons are clearly annotated in the corresponding tables. Revisions of reporting forms, methodology, and compilation practices take place when deemed necessary. The public is informed of these revisions when the data are disseminated.</p>	<p>Data accessibility Data are clearly presented in the BoB's monthly publication (<i>BFS</i>) and annual reports, both easily accessible on the BoB website. A hard copy of the <i>BFS</i> is distributed free of charge. Approximate dates of release of the statistics are announced in the <i>BFS</i> and on the BoB website, and are generally met.</p> <p>Metadata accessibility A comprehensive document on sources and methods for monetary statistics compilation is not disseminated. The BoB posts financial sector metadata on the DSB website and regularly updates them. There is a direct link between the BoB's website and the DSB website, although more could be done to inform users of the availability of these metadata.</p> <p>Assistance to users The BoB publishes contact information and invites questions and comments. A list of publications is included in the <i>BFS</i>.</p>

Table 3f. Botswana: Assessment of Data Quality—Dimensions 2 to 5—Balance of Payments Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions The structure, concepts, and definitions of the balance of payments statistics follow <i>BPM5</i> guidelines.</p> <p>Scope In principle, the balance of payments statistics cover all transactions between residents and nonresidents. In practice, lack of data prevents the compilation of data on trade in goods not captured by customs, such as shuttle trade, Internet commerce, and smuggling, and no adjustments are made for them.</p> <p>Classification/sectorization Institutional units are classified according to <i>BPM5</i>. Minor classification issues arise from data sources, in particular, administrative sources using definitions and classifications that deviate from <i>BPM5</i>.</p> <p>Basis for recording The principle of market valuation specified in <i>BPM5</i> is used to value transactions. In cases where transactions are estimated from changes in stocks during the reporting period, no account is taken of valuation and other changes.</p>	<p>Source data Source data are broadly adequate. ITRS data, used mostly for services, are unreliable, and alternative data sources should be developed. Data are not always available in a timely fashion.</p> <p>Assessment of source data Source data are not systematically assessed at the data-entry level. Checks take place after initial aggregation.</p> <p>Statistical techniques The methods used for estimating missing data, calculating import values, and estimating flows from stock data are inadequate. However, data compilation, estimation, and adjustments mostly employ sound techniques.</p> <p>Assessment and validation of intermediate data and statistical outputs Sound methods are used for assessing and validating intermediate data.</p> <p>Revision studies No formal revision studies are carried out, but revisions are reviewed and, if patterns are identified, appropriate action is taken to improve estimates.</p>	<p>Periodicity and timeliness Balance of payments data are compiled annually and published in the monthly <i>BFS</i> and the BoB <i>Annual Report</i>. Preliminary data are disseminated within two months of the end of the reporting period, while revised (final) data are available after nine months. Periodicity and timeliness therefore meet GDDS recommendations.</p> <p>Consistency Balance of payments data are consistent over time. Data are also consistent within itself. Discrepancies exist with national accounts statistics concerning imports, exports, and payments related to settlements within the Southern African Customs Union (SACU), mainly due to different data sources and valuation methods. There are no material discrepancies with other datasets.</p> <p>Revision policy and practice There is no formal revision policy. Revisions are carried out between February and September as additional data become available. Revision studies are not published.</p>	<p>Data accessibility Balance of payments data are easily accessible through the BoB website and its statistical publications. The <i>BFS</i> is widely circulated and free to Botswana users. Data publication follows a stable cycle, but no formal schedule is available. Detailed data not routinely published are made available on request, and contact details are easily available.</p> <p>Metadata accessibility Metadata are available only from the DSBB website. Although the BoB website provides a link to the DSBB, this is not associated with data publication. More could be done to inform data users of the availability of these metadata. Printed publications of the BoB make no reference to the existence of metadata.</p> <p>Assistance to users The BoB publishes contact information and invites questions and comments. A list of publications is included in the <i>BFS</i>.</p>

III. STAFF'S RECOMMENDATIONS

10. Based on the review of Botswana's statistical practices, discussions with the data-producing agencies, and responses from data users, the mission has a set of recommendations. They are designed to increase further Botswana's adherence to internationally accepted statistical practices and would, in the mission's view, enhance the analytical usefulness of Botswana's statistics. Some additional technical suggestions are included in the Detailed Assessments volume.

Cross-cutting recommendations

- Strengthen cooperation between the MFDP, CSO, BoB, and other agencies to ensure timely compilation and exchange of data. The BoB should enjoy access to customs data, and the CSO should document what processing is carried out on trade data.
- Monitor the consistency of the main macroeconomic datasets and reconcile differences regularly.
- Give more emphasis to timeliness by using and disseminating more preliminary data.
- Establish a comprehensive list of institutional units consistent with the *1993 SNA* sectorization to be applied consistently across all datasets.
- Establish and publicize direct links between the agencies' websites and the DSBB to facilitate access to metadata. Keep metadata up-to-date.
- Support greater use of preliminary data by formalizing revision policies and implementing regular revision cycles.
- Maintain a current Business Register.

National accounts

- Increase the number of staff working on national accounts.
- Document the methodology used to derive the 1994/95 benchmark estimates.

- Undertake comprehensive surveys of enterprises at least every few years.
- Introduce estimates for informal activities.
- Bring classification and sectorization into line with the *1993 SNA*.
- Update the base year for the volume figures for GDP at least every five years.

Consumer price index

- Include owner-occupied housing in the CPI.
- Improve the overall quality adjustment techniques.

Wholesale price index

- Increase the number of staff in the Price Statistics Unit, particularly those working on the WPI.
- Develop concepts and definitions for Botswana's WPI to meet the needs of data users. Basically, the CSO needs to determine if it wants to produce an output index (PPI), an Intermediate Consumption Index, or a Supply Price Index.
- Develop a representative sample, including industries such as mining (gold and diamond industries), cattle production, etc.
- Classify the WPI using internationally accepted standards such as the International Standard Industrial Classification of All Economic Activities (ISIC) and/or the Central Product Classification (CPC).
- Conduct ad hoc surveys. Include own-account production of market goods for own final consumption in the WPI.

Government finance statistics

- Compile and disseminate GFS for extrabudgetary institutions, consolidated central government, and consolidated general government, at least on an annual basis.
- Formally assign responsibility for disseminating fiscal statistics to the public to the minister of the MFDP.

- Allocate more human resources to the compilation and dissemination of GFS, and emphasize training in international methodologies. Reduce staff turnover.
- Bring the classifications used for subannual and annual fiscal statistics on the operations of budgetary central government and local governments into conformity with the guidelines of the *GFSM 1986*. Consider adopting a migration path to the *GFSM 2001*.
- Post the monthly summary cash-flow table on the MFDP's website immediately after it becomes available. Compile a quarterly central government debt table and post it on the MFDP's website. In this manner, Botswana would easily meet the GDDS timeliness standard.

Monetary statistics

- Report the BoB's preliminary monthly accounting data with a level of detail compatible with the recommendations of the *MFSM* to the Research Department, in electronic form and no later than 15 working days after the reference month.
- Review the report forms of the ODCs to ensure the most complete and timely information for supervisory and statistical purposes. Establish electronic reporting systems to compile data from the ODCs.

Balance of payments statistics

- Improve estimation methods and statistical techniques. Review benchmarks regularly, particularly for valuation adjustments to imports. Develop estimates for unrecorded trade and other missing data. Identify, as a matter of urgency, alternative sources for travel data.
- Initiate planning for redeploying staff and other resources from processing bank reports on foreign exchange transactions to address other needs (such as surveys) and produce data of higher quality. Ultimately, terminate the banks' foreign exchange reporting requirement.
- Establish a formal intragovernmental agreement or change of the *Bank of Botswana Act (BoB Act)* to clarify the BoB's responsibility for compiling balance of payments data.

Appendix Table 4. Botswana: Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Macroeconomic Data Compared to the General Data Dissemination System

D=daily; W=weekly; M=monthly; Q=quarterly; A=annual; NA = not applicable/not yet disseminated						
GDDS Data Category	Coverage (meets GDDS)	Periodicity		Timeliness		
		GDDS	Botswana	GDDS	Botswana	
COMPREHENSIVE FRAMEWORK						
Real sector: National accounts	Yes	A	Q, A	10–14 months	17 months	
Fiscal sector: Central government operations	Yes	A	A	6–9 months	8 months	
General government operations	No	A	NA	6–9 months	NA	
Financial sector: Depository corporations survey	Yes	M	M	2–3 months	3 months	
External Sector: Balance of payments	Yes	A	A	6–9 months	4–9 months	
International investment position	Yes*	A	A*	6–9 months	9 months	
DATA CATEGORIES AND INDICATORS						
Real Sector						
GDP (nominal and real)	Yes	A (Q)	Q, A	6–9 months	8 months	
Gross national income, capital formation, saving	Yes	A	A	6–9 months	8 months	
Manufacturing or industrial production index/indices	No	M	NA	6–12 weeks	NA	
Primary commodity, agricultural, or other indices, as relevant	No	As relevant	NA	6–12 weeks	NA	
Consumer price index	Yes	M	M	1–2 months	1–2 weeks	
Producer price index	No	M	Q	1–2 months	Q	
Employment	Yes	A	Semi-annual	6–9 months	7 months	
Unemployment	Yes	A	A	6–9 months	6–9 months	
Wages/earnings (all sectors)	Yes	A	Semi-annual	6–9 months	7 months	
Fiscal Sector						
Central government budgetary aggregates: revenue, expenditure, balance, and financing with breakdowns (debt holder, instrument, currency)	Yes	Q	Q	1 quarter	4–9 months	
Interest payments	Yes	Q	Q	1 quarter	4–9 months	
Central government debt: domestic and foreign debt, as relevant, with appropriate breakdowns (debt holder, instrument, currency)	Yes	A (Q)	A	1–2 quarters	12 months	
Government-guaranteed debt	Yes	A (Q)	A	1–2 quarters	12 months	
Financial Sector						
Broad money and credit aggregates	Yes	M	M	1–3 months	3 months	
Central bank aggregates	Yes	M	M	1–2 months	3 months	
Short- and long-term government security rates, policy variable rate	Yes	M	D, M	In high frequency publication	1 day	
Money or interbank market rates and a range of deposit and lending rates	Yes	M	M	In high frequency publication	1 day	
Share price index, as relevant	Yes	M	W, M	In high frequency publication	1 day	
External Sector						
Balance of payments aggregates	Yes	A (Q)	A	6 months	9 months	
Public and publicly guaranteed external debt outstanding, with maturity breakdown	Yes	Q	A	1–2 quarters	12 months	
Public and publicly guaranteed debt-service schedule	No	Twice yearly	NA	3–6 months	NA	
Private external debt not publicly guaranteed	No	A	NA	6–9 months	NA	
Gross official reserves denominated in U.S. dollars	Yes	M	M	1–4 weeks	1 month	
Reserve-related liabilities	No	M	NA	1–4 weeks	NA	
Total exports and total imports	Yes	M	M	8–12 weeks	4 weeks	
Major commodity breakdowns with longer time lapse	Yes	M	M	8–12 weeks	4 weeks	
Exchange rates: spot rates	Yes	D	D	In high frequency publication	1 day	

INTERNATIONAL MONETARY FUND

BOTSWANA

Report on the Observance of Standards and Codes (ROSC)—Data Module

Response by the Authorities

March 27, 2007

	Contents	Page
I. Overview		2
II. Response to Recommendations.....		2

I. OVERVIEW

The authorities (the Bank of Botswana (BoB) and the Ministry of Finance and Development Planning (MFDP), including the Central Statistics Office (CSO)) very much welcome the IMF's data ROSC report on Botswana. This provides an invaluable update on progress that has been made since the original data ROSC mission in October 2001, and the country is proud to have been among the first countries chosen for such a follow-up assessment.

The Botswana authorities are in basic agreement with the content of the report. It is clear that in some areas, considerable progress has been made to improve both production and, in particular, dissemination of official statistics in Botswana. The greater coordination between the statistics-producing agencies that has been developed since the 2001 ROSC mission has clearly paid off in many instances. Nevertheless, standards in other respects are less than would be desired. In key respects, there remains much work to be done if Botswana is to progress toward the standards required by the SDDS, and the authorities take note of the report's observation that some additional investment of resources is required.

II. RESPONSE TO RECOMMENDATIONS

Cross-cutting recommendations

- **Strengthen cooperation between the MFDP, CSO, BoB, and other agencies to ensure timely compilation and exchange of data. The BoB should enjoy access to customs data, and the CSO should document what processing is carried out on trade data.**

The high-level Statistics Producers Committee (SPC) that was established following the 2001 ROSC has worked well. There remains further scope for maximizing the potential for cooperation at the technical level. The BoB will take up the issue of direct access to customs data through the MFDP while the CSO will include additional material on methodology on its website.

- **Monitor the consistency of the main macroeconomic datasets and reconcile differences regularly.**

The agencies will look at issues of methodological inconsistencies (such as the treatment of SACU revenues in the balance of payments and national accounts) as a matter of priority. There is scope to develop regular cross-checks between datasets to improve accuracy.

- **Give more emphasis to timeliness by using and disseminating more preliminary data.**

The importance of the trade-off between timeliness and accuracy is acknowledged. It is also recognized that there may be areas where timeliness can be improved without compromising accuracy. However, current practices are guided by well-established policies and these will need to be subject to high-level review before changes can be implemented.

- **Establish a comprehensive list of institutional units consistent with the 1993 SNA sectorization to be applied consistently across all datasets.**

The recommendation is accepted, although the modalities, including possible requirements for technical assistance, have still to be considered.

- **Establish and publicize direct links between the agencies' websites and the DSBB to facilitate access to metadata. Keep metadata up to date.**

All agencies are committed to improving the relevant website links, including access to metadata, although in some cases technical constraints with website development have slowed. The existing policy is for metadata to be updated annually.

- **Support greater use of preliminary data by formalizing revision policies and implementing regular revision cycles.**

The recommendation is accepted and is already being implemented. For example, the BoB now includes relevant information in the monthly Botswana Financial Statistics (BFS) publication.

- **Maintain a current Business Register.**

The ongoing enterprise census will bring the register up to date. The necessary measures to maintain the register will be identified. The BoB will share with the CSO any changes made to the coverage of the annual balance of payments survey.

National accounts

- **Increase the number of staff working on national accounts.**

The CSO is doing and will continue to do all it can to increase the number of staff in the National Accounts Unit. As of March 2007, the number of professional staff in the Unit was increased by one. However, it should be appreciated that the CSO is affected by government financial and resource constraints. (Priority: medium term)

- **Document the methodology used to derive the 1994/95 benchmark estimates.**

The CSO appreciates the necessity of this recommendation. Therefore, although no documentation has yet been produced, the department is committed to working on it. Currently, the CSO is conducting the Annual Economic Survey. Data from the survey will be used to establish updated benchmark estimates. (Priority: short term)

- **Undertake comprehensive surveys of enterprise at least every few years.**

The CSO is currently conducting an Annual Economic Survey (AES) and the plan is to have the survey carried out every year. (Priority: short term)

- **Introduce estimates for informal activities.**

The point is noted; the CSO currently is conducting an Informal Sector Survey, and once data become available this recommendation will be implemented, provided that the CSO is able to obtain relevant technical support. (Priority: medium term)

- **Bring classification and sectorization into line with the 1993 SNA.**

Classification/sectorization systems currently used are consistent with internationally accepted standards and guidelines. However, the CSO sees the need to classify and break down sectors according to the 1993 SNA. (Priority: short term)

- **Update the base year for the volume figures for GDP at least every five years.**

The need for the action is noted. Plans are under way to rebase national accounts estimates to a more current base year, after which the CSO will consider implementing the recommendation. (Priority: medium term)

Consumer price index

- **Include owner-occupied housing in the CPI.**

The CSO will need to do thorough investigations on this, including stakeholder consultations. Even if agreed, this is not attainable in the short or medium term.

- **Improve the overall quality adjustment techniques.**

The recommendation is accepted.

Wholesale price index

The CSO agrees to all the recommendations regarding the WPI and will take them on board within the medium term.

Government finance statistics

- **Compile and disseminate GFS for extrabudgetary institutions, consolidated central government, and consolidated general government, at least on an annual basis.**

The recommendation is noted. The source of data for extrabudgetary institutions is not compiled in the Government Accounting and Budgeting System (GABS); therefore, an extra effort will have to be made to use the end-of-year financial statements of such institutions to extract the data. The problem is that the responsible unit in MFDP has a serious staff shortage (as the mission had noted), but efforts are under way to recruit and train additional staff.

With regard to the preparation of general government accounts, there is currently a backlog in the preparation and auditing of local authorities' accounts. However,

assistance has been sought from the African Development Bank to help in strengthening the responsible department in the Ministry of Local Government.

- **Formally assign responsibility for disseminating fiscal statistics to the public to the minister of the MFDP.**

The release of information to the National Assembly is accompanied by budget tables which are published and are available to the general public on an annual basis. However, plans are under way to post some selected tables from the publications on the MFDP's website.

- **Allocate more human resources to the compilation and dissemination of GFS, and emphasize training in international methodologies. Reduce staff turnover.**

One officer from the Cash Flow Unit (CFU) is currently attending a GFS course offered by the IMF. As mentioned earlier, processes are under way to recruit three more officers into the CFU; this would bring the staff complement in the unit to four by the end of the year. The total number will be five after one additional member returns from long-term training by the beginning of next year. Fully staffed, the current establishment of the CFU is sufficient to carry out its responsibilities, including additional tasks resulting from these recommendations.

- **Bring the classifications used for subannual and annual fiscal statistics on the operations of budgetary central government and local governments into conformity with the guidelines of the GFSM 1986. Consider adopting a migration path to the GFSM 2001.**

Plans are under way to prepare central government statistics using the 2001 GFSM but, as already noted, this is constrained by current staff shortages. Local authorities will be brought on board at a later stage.

- **Post the monthly summary cash-flow table on the MFDP's website immediately after it becomes available. Compile a quarterly central government debt table and post it on the MFDP's website. In this manner, Botswana would easily meet the GDDS timeliness standard.**

The recommendation is noted. A commitment was made to publish the cash-flow tables on the website immediately after they are available. But because of an IT setback, updates on the website were not made since the initial posting. The MFDP's IT unit is currently working with consultants to update the website. With regard to the debt tables, efforts are being made to update the Commonwealth Secretariat–Debt Recording and Management System (CS-DRMS) which could then be used to generate various reports as per our users' requirements and post same on the website at least by the end of the second quarter of 2007.

Monetary statistics

- **Report the BoB's preliminary monthly accounting data with a level of detail compatible with the recommendations of the MFSM to the Research Department, in electronic form and no later than 15 working days after the reference month.**

The modalities and implications of moving to a 15-day reporting format are being examined.

- **Review the report forms of the ODCs to ensure the most complete and timely information for supervisory and statistical purposes. Establish electronic reporting systems to compile data from the ODCs.**

The reporting template is currently being reviewed with the intention of providing the full detail required for statistical purposes. The new format will be introduced shortly. Electronic reporting formats also are being developed as part of this exercise.

Balance of payments statistics

- **Improve estimation methods and statistical techniques. Review benchmarks regularly, particularly for valuation adjustments to imports. Develop estimates for unrecorded trade and other missing data. Identify, as a matter of urgency, alternative sources for travel data.**

Estimation methods and statistical techniques, including how to estimate unrecorded trade, will be examined in the context of possible technical assistance requirements. The possibility of using more detailed customs data to refine benchmarks is being investigated. The absence of reliable up-to-date travel data is recognized as a serious problem, and the BoB will support the Department of Tourism where possible in efforts to produce improved statistics.

- **Initiate planning for redeploying staff and other resources from processing bank reports on foreign exchange transactions to address other needs (such as surveys) and produce data of higher quality. Ultimately, terminate the banks' foreign exchange reporting requirement.**

Some conflicting advice has been received in this area, with other technical assistance emphasizing the potential value of using the information on foreign exchange transactions. During 2007, surveys of trade in services are being conducted in parallel with collecting information from banks. After this trial period, the way forward, including any necessary retraining and redeployment of staff, will be determined.

- **Establish a formal intra-governmental agreement or change of the *Bank of Botswana Act (BoB Act)* to clarify the BoB's responsibility for compiling balance of payments data.**

The modalities of both of these possibilities will be examined. However, it must be emphasized that the BoB already possesses broad legal powers to collect information, and these have so far proven sufficient to support the production of balance of payments data.

INTERNATIONAL MONETARY FUND

BOTSWANA

Detailed Assessments Using the Data Quality Assessment Framework (DQAF)

Prepared by the Statistics Department

Approved by Robert W. Edwards and Abdoulaye Bio-Tchané

March 27, 2007

This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Botswana's Report on the Observance of Standards and Codes (ROSC)—Data Module. It also includes as an appendix the DQAF generic framework.

Contents	Page
Acronyms.....	3
I. National Accounts.....	6
II. Price Statistics (Consumer Price Index).....	32
III. Price Statistics (Wholesale Price Index).....	54
IV. Government Finance Statistics.....	76
V. Monetary Statistics.....	101
VI. Balance of Payments Statistics.....	124
 Tables	
1. DQAF (July 2003): Summary of Results for National Accounts Statistics.....	29
2. DQAF (July 2003): Summary of Results for Consumer Price Index.....	52
3. DQAF (July 2003): Summary of Results for Wholesale Price Index.....	73
4. DQAF (July 2003): Summary of Results for Government Finance Statistics.....	98
5. DQAF (July 2003): Summary of Results for Monetary Statistics.....	122
6. DQAF (July 2003): Summary of Results for Balance of Payments Statistics.....	150
 Appendices	
I. DQAF—Generic Framework.....	152
II. Summary of the General Data Dissemination System (GD DS).....	155

Acronyms

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
AD	Accounting Department (of the BoB)
AES	Annual Enterprise Survey
<i>BFS</i>	<i>Botswana Financial Statistics</i>
BoB	Bank of Botswana
<i>BoB Act</i>	<i>Bank of Botswana Act</i>
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
BSD	Banking Supervision Department (of the BoB)
BSIC	Botswana Standard Industrial Classification
CFU	Cash-Flow Unit (of the MFDP)
CIUs	Collective investment undertakings
<i>CIU Act</i>	<i>Collective Investment Undertakings Act</i>
COICOP	Classification of Individual Consumption by Purpose
<i>CPC</i>	<i>Central Product Classification</i>
CPI	Consumer price index
<i>CPI Manual</i>	<i>Consumer Price Index Manual</i> , 2004
CS-DRMS	Commonwealth Secretariat - Debt Recording and Management System
CSO	Central Statistics Office
DBA	Division of Budget Administration (of the MFDP)
DCS	Depository Corporations Survey
DQAF	Detailed Assessments Using the Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
EA	Enumeration Area
EER	Enterprise and Establishment Register
GABS	Government Accounting and Budgeting System
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>
HIES	Household Income and Expenditure Survey
ICPI	Intermediate Consumption Price Index
<i>ISIC</i>	<i>International Standard Industrial Classification of All Economic Activities</i>
ISWGNA	Inter-secretariat Working Group on National Accounts
ITRS	International Transactions Reporting System
MFDP	Ministry of Finance and Development Planning
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i> , 2000
MLG	Ministry of Local Government
MOA	Ministry of Agriculture
MSS	Monetary Statistics Section (of the BoB)

NASU	National Accounts Statistics Unit (of the CSO)
ODCs	Other depository corporations
OFCs	Other financial corporations
PDSU	Public Debt Service Unit
PPI	Producer price index
<i>PPI Manual</i>	<i>Producer Price Index Manual 2004</i>
PSU	Prices Statistics Unit (of the CSO)
RD	Research Department (of the BoB)
<i>Reserves Template</i>	<i>International Reserves and Foreign Currency Liquidity Template</i>
ROSC	Report on the Observance of Standards and Codes
SACU	Southern African Customs Union
SADC	Southern African Development Community
SDDS	Special Data Dissemination Standard
SISU	Statistics and Information Service Unit
SPI	Supply price index
SRT	Survey of Recent Trends
SUTs	Supply and use tables
TSU	Trade Statistics Unit (of the CSO)
VAT	Value-added tax
WPI	Wholesale price index

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

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

This ROSC assessed the wholesale price index (WPI) instead of the producer price index (PPI), which was assessed in the 2002 ROSC data module. The Botswana PPI compilation and dissemination were terminated in 2001. Since there are no international best practices from which a WPI can be assessed, the WPI was assessed against the *Producer Price Index Manual 2004 (PPI Manual)*.

I. NATIONAL ACCOUNTS

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 Central Statistics Office (CSO), a department of the Ministry of Finance and Development Planning (MFDP), operates within the legal framework of the *Statistics Act* (1967) (the *Statistics Act*). Under the provisions of the *Statistics Act*, the MFDP defines statistical policy through its permanent secretary, while the government statistician (the head of the CSO) programs the operations of the CSO. The *Statistics Act* authorizes the collection of the source data for the compilation of national accounts, subject to the provisions of the *Statistics Act* and the direction of the minister of the MFDP. The government statistician is responsible for the collection, tabulation, analysis, and publication of these statistics. The *Statistics Act* also stipulates that published statistics should be laid before the national assembly within 14 days of their release.

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

Problems occurred in the past with the receipt of data from other government agencies, particularly with the timeliness of their delivery. Thus, through a joint initiative together with the Bank of Botswana (BoB) and the MFDP, a Statistics Producer Committee was established made up of representatives from all the major data-producing agencies. This committee meets three times per year and has been very effective in resolving any problems concerning the sharing of data. The 2001 Report on the Observance of Standards and Codes (ROSC) mission identified a problem with the supply of breakdowns of the data on trade in services from the BoB, but this has since been resolved.

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

All persons employed in the execution of any duty under the *Statistics Act* are required to sign a declaration of secrecy on entry. This provision also applies to non-CSO staff, including consultants. Breaches of this provision and the use of insider information for personal gain are offenses punishable by the payment of a fine and/or imprisonment.

The introduction of new or revised statistical enquiries have to be advertised in the *Gazette* and are subject to statutory regulations. The questionnaires used to collect data for national accounts all contain a statement on confidentiality. This stipulates that the CSO cannot

publish information relating to an identifiable business without first getting its written permission. It also states that the data will be treated in strict confidence and used for statistical purposes only. It further states that the data will only be published in aggregate form. However, it does not specify the actual aggregation rule used, and neither is there a formal statement on this within the CSO. Fortunately, the staff is well aware of the need to avoid indirect disclosure of individual data by publishing figures covering only two or three businesses. The confidentiality statement on the questionnaires also states that the provisions are not affected by any other legislation.

Unit records are sometimes provided to researchers, but all identification details are removed before this is done. Respondents' data forms always are kept under lock and key and can be accessed only by authorized staff. Forms for disposal always are shredded onsite. Rooms always are locked when empty, because the CSO building cannot be fully secured. All computer systems are protected by passwords.

Recommendation: The aggregation rule for indirect disclosure of respondents' data should be stated formally and circulated to all relevant staff.

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

Statistical reporting is ensured through legal mandate. Refusal or neglect to provide information, or making false statements, are offenses subject to the payment of a fine and/or imprisonment. However, the CSO always tries to use persuasion to obtain response, rather than the legal approach. The *Statistics Act* gives the CSO the power to obtain information in respect of any statistical inquiry carried out under the *Statistics Act*. The CSO also can access all public or other records, if approval of the minister has been obtained. However, the authorizing officer has to comply with any oath of secrecy prescribed by the agency involved. The CSO does not have the right to inspect books and records, premises, and inventories of businesses or persons in cases of noncompliance. A contact telephone number is included on the questionnaires for anyone who has a question or needs assistance.

0.2 Resources

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

The CSO's National Accounts Statistics Unit (NASU) has a staff of 10, consisting of the unit head, three statisticians, one statistical officer (diploma level), and five nonprofessionals engaged in data collection and data entry operations. The CSO also has a separate Census Office, which provides additional support for the collection of source data. The number of staff is not considered sufficient for the established work program, resulting in delays in the

production of the national accounts. However, government constraints make it difficult to increase the number of staff working on national accounts without adversely affecting some other activity. The qualifications of the NASU staff seem to be adequate, with a fair mix of professionals and nonprofessionals. Staff do have some opportunities for training, such as the IMF's national accounts training course in Washington, D.C. and other regional and European courses. Civil service salary levels are low compared to the private sector, causing problems for the CSO in recruiting new staff and, in particular, in retaining staff. A restructuring plan for the MFDP, currently under consideration, may give more autonomy to the CSO and could resolve the restrictions on recruitment and salary levels.

Computer resources are quite good since getting finance for improvements in this area is not as restricted as it is for staff recruitment and salary levels. For this reason, there is a regular program for updating PCs. The CSO plans to replace the servers supporting the network. A problem currently exists with developing in-house software. However, the CSO has obtained approval to recruit three new programmers to assist with this work. It also has obtained approval to set up a backup facility in one of the regional offices. This also could be used to store offsite backups of the data.

Working facilities are a bit run down and overcrowded. Occasional problems arise with getting the right transport vehicle for a particular job from the government agency supplying this service, but, in general, this operates satisfactorily. Except for the restrictions on recruitment and salary levels, funding for the statistical program is adequate.

Recommendation: Find some means to increase the number of staff working on national accounts.

0.2.2 Measures to ensure efficient use of resources are implemented.

All staff undergo an annual performance review. There were also staff perception surveys in 1998 and 2004. These allowed staff to make their views known anonymously on a wide range of issues. Wherever possible, these views were used to generate improvements in practices. Line managers are responsible for ensuring the efficiency of their work programs.

0.3 Relevance

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

The CSO established annual meetings of users to gain insight into their views on statistics. Unfortunately, the CSO did not find these meetings useful because users were not forthcoming with their views. Consequently, they set up a reference group comprising senior

government and private users for each subject area, and they solicit their views whenever a significant change is being considered.

The CSO staff is active in international meetings and seminars, particularly those organized by the Southern African Development Community (SADC) Statistics Committee, the regional authority on statistics.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The CSO management is committed to data quality and cascades this concern down through the ranks. A vision and mission statement is prominently displayed around the office. Although no formal training is offered for staff, supervisors actively promote quality issues. Given resource constraints, an active program to improve efficiency in work processes exists. Such reviews pay due consideration to quality to ensure that this does not suffer.

0.4.2 Processes are in place to monitor the quality of the statistical program.

Managers regularly monitor work processes; for example, supervisors check the work of their team. Also, the computer systems have built-in checks on all aspects of data capture and processing. A technical working group reviews all new questionnaires; however, it does not undertake reviews of the other work processes.

Recommendation: Extend the activities of the technical working group to cover work processes.

0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.

The CSO has an established policy always to consider the trade-off between accuracy and timeliness. However, it could be argued that too much emphasis is given to accuracy at the expense of timeliness for the national accounts. For instance, staff do not finalize the processing of their surveys until they have achieved a response rate of at least 60 percent. Unfortunately, this results in delays in publishing the estimates, as stated in 4.1.2.

1. Assurances of integrity

1.1 Professionalism

1.1.1 *Statistics are produced on an impartial basis.*

The *Statistics Act* supports professional independence by clearly stating and recognizing the statistical functions of the CSO. Section 3 of the *Statistics Act* details that statistics may be collected at such times, in such places or areas, and in respect of such periods as may be prescribed.

The CSO, while not autonomous, clearly advocates the credibility of statistical results and fully understands the importance of noninterference from other government agencies. The CSO government statistician reports to the permanent secretary of the MFDP on administrative matters but to the parliament and the minister of MFDP on professional matters.

With regard to professionalism, all job descriptions are transparent, detailed, and specific in the level of qualifications. Vacancies are filled through advertisements, and potential candidates are interviewed by a panel that comprises authorities from the MFDP and the CSO.

The CSO provides formal and on-the-job training in the methodology and compilation methods, including participation in seminars, courses, and workshops arranged by the SADC.

The CSO encourages staff to subscribe to the *African Statistical Journal*, although they are not encouraged to research and write analytical papers for journal publications. This avoids a conflict of interest because they are government employees. The CSO considerably encourages staff to submit research papers to the publicly available MFDP newsletter.

In seeking to promote and maintain the CSO's reputation for professionalism, the internal technical working group encourages research and analysis, including the rationale for the choice of methodologies.

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

The CSO's choices of source data for compiling and disseminating national accounts are determined by the availability of basic statistics and data from administrative records according to the criteria of statistical reliability, coverage, and consistency. Hence, the choice of source data and statistical techniques primarily is based solely on statistical considerations, and decisions about the timing, media, and other aspects of dissemination are based on

statistical considerations. No evidence of political or government interference exists in the choice of data sources and statistical processes used in compiling of national accounts.

Section 8 of the *Statistics Act* requires that official statistics be published. The national accounts are simultaneously disseminated to all users. Political approval is not needed to publish statistical information. The CSO maintains a mailing list used for transmitting statistics to users. This mailing list is updated regularly. The national accounts are released first through the budget speech.

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

The government statistician is responsible for responding to any erroneous interpretation and misuse of the national accounts data. Incidences of inappropriate interpretation and misuse of statistics have occurred, but these are clarified immediately.

1.2 Transparency

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

The *Statistics Act*, in English, is available to the public on the CSO's website, on the IMF's Dissemination Standards Bulletin Board (DSBB), and in publications of the laws of Botswana. All statistical publications identify where to find more information about the CSO and its products. Thus, the contact persons, postal addresses, telephone numbers, facsimile numbers, e-mail addresses, and other relevant information of interest are available.

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

Some information on prerelease access to national accounts is documented on the DSBB but not on the CSO's website. In addition, the CSO's website does not cover all agencies and does not give reasons for the advance notification or its duration.

Recommendation: The CSO should provide all users with full details of all prerelease access to its statistics.

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

The CSO estimates and releases all national accounts data. All the publications display the CSO logo (on press releases, in hard copy publications, and on the website). In all statistical publications, the public is informed that attribution is required. Moreover, in cases of joint publication, the CSO is clearly identified as the data-producing agency.

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

Whenever revisions or changes in methodology occur, reference groups of major stakeholders are constituted for members to be made aware of such changes. Details of changes in methodology are included as appendices to statistical reports. In the case of new surveys, the CSO warns users well in advance that there will be changes.

1.3 Ethical standards

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

The *Statistics Act* provides clear guidelines for correct behavior when the CSO or its staff is confronted with potential conflict-of-interest situations. Thus, all persons employed in the execution of any duty under the *Statistics Act* (or any regulation made thereunder) are required to sign a declaration of secrecy on entering upon duty. This provision of the *Statistics Act* also applies to non-CSO staff, including short- and long-term consultants. Breaches of the oath of secrecy and the use of insider information for personal gain are offenses punishable by payment of a fine, imprisonment, or both.

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 national accounts of Botswana are still based on some of the concepts and definitions of the *System of National Accounts 1968 (1968 SNA)*. However, some significant changes have been introduced to move the accounts toward the *System of National Accounts 1993 (1993 SNA)*. These changes include the adoption of some of the terminology of the *1993 SNA*, such as Financial Intermediation Services Serving Households (FISIM). The concept of taxes less subsidies on production has also been brought into line with the *1993 SNA*. Probably, the revision that has had the greatest impact on the value of the GDP has been the reclassification of mineral exploration costs from current to capital expenditure. Other, less significant, changes are being implemented in the new annual economic survey for 2005/06, such as the capitalization of computer software.

Recommendation: The CSO should adopt fully the 1993 SNA as soon as possible.

2.2 *Scope*

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

The national accounts do not fully meet the tables and accounts that the Inter-secretariat Working Group on National Accounts (ISWGNA) has determined as a minimum requirement. This is because the NASU has not yet fully implemented the *1993 SNA*. The published data cover annual GDP, from both the production and expenditure approaches, at current and constant prices. The value-added components at current prices also are produced annually. Sector accounts in line with the *1968 SNA* are published, but only down to the capital account, not covering the financial account. As well as requiring the above tables and accounts, the ISWGNA also recommends some additional tables generally considered very useful to users. Of these, quarterly GDP, from both the production and expenditure approaches, at current and constant prices are published. On the other hand, annual supply and use tables (SUTs) are not produced regularly.

The GDP figures cover the whole economy—there are no free zones in Botswana. The production boundary is generally in line with the *1993 SNA*. Own-account production of all goods for own final consumption, and output of goods for own-account fixed capital formation, have already been implemented and are being treated correctly. Additionally, the important concept of mineral exploration costs has been brought into line with the *1993 SNA*. Some other changes have not been implemented yet, that is, the production of computer software, entertainment, literary, or artistic originals. However, the value of the production of such items is insignificant. Neither does the NASU measure the value of work-in-progress for agriculture. This is a deliberate policy to avoid having to include potentially misleading forecast estimates of the value of the harvest for the current year. The asset boundary is also generally in line with the *1993 SNA*. The main exception is that the *1993 SNA* concept of defense-related assets that could be used for civilian purposes has not been implemented yet. Some of these remaining *1993 SNA* changes are in the process of being implemented in the new annual economic survey for 2005/06.

Recommendation: The NASU should publish all the accounts and tables recommended by the ISWGNA, when resources permit.

2.3 *Classification/sectorization*

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

The institutional sectors, transactions, and other flows are broadly in line with the *1968 SNA*. Production activities are classified using the Botswana Standard Industrial Classification

(BSIC), which is broadly equivalent to the *International Standard Industrial Classification of All Economic Activities (ISIC)*. However, the CSO is still using BSIC 2, rather than BSIC 3. The Classification of Individual Consumption by Purpose (COICOP) is now used for household final consumption. However, the Classification of the Functions of the Government (COFOG) is not used. Imports and exports are classified using the Standard International Trade Classification (SITC).

A particular problem exists with the classification of taxes on products. Customs duties and excise taxes collected within the Southern African Customs Union (SACU)¹ are paid into a central pool. They are then distributed to the member countries according to established formulas. The CSO currently includes all its receipts from SACU in taxes on products, whereas they should only include those duties collected on transactions relevant to Botswana. Duties collected in the other member countries, which relate to production within those countries, will enter the Botswana figures only via imports. Such imports are deducted from the expenditure estimates for Botswana's GDP. Thus, they will cancel out within the GDP expenditure estimates, since they are also included within final expenditure. Consequently, to maintain the conceptual identity between GDP measured from the production and expenditure approaches, only duties collected on transactions relevant to Botswana should be included in taxes on products. This change could have a significant impact on the figures.

Recommendations:

1. *Adopt the BSIC Rev.3 classification as soon as is practicable.*
2. *Replace receipts from SACU with the corresponding duties on transactions relevant to Botswana.*

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

Valuation rules used for recording flows and stocks are generally in line with the *1993 SNA*. One important exception is that imports of goods are still valued c.i.f. (cost, insurance and freight), even though the CSO is able to convert them to the f.o.b. (free on board) basis required by the *1993 SNA*. Owing to the lack of resources, the figures have not been converted to f.o.b. yet. The CSO should be careful in this conversion since significant imports come from Botswana's neighbors. Therefore, the f.o.b. value as the goods leave the exporting country will be identical to the c.i.f. value as they enter Botswana.

¹ SACU comprises Botswana, Lesotho, Namibia, South Africa, and Swaziland.

Market output is recorded at basic prices, as are agricultural goods and capital formation produced for own final use. The output of diamond mining uses the value of exports as declared to customs because the CSO can get quantity data, but not prices. This method ensures consistency between the production and export figures but relies on the accuracy of the export values. Intermediate and final consumption are valued at purchaser's price. Intermediate consumption excludes deductible value-added tax (VAT), as required in the 1993 SNA. Unfortunately, for intermediate consumption, the wording on the new 2005/06 economic survey forms could be misleading. It asks for purchasers to "exclude the portion of VAT refunded by government." It would have been clearer to have used terminology familiar to businesses, that is, "exclude deductible, but include nondeductible, VAT." Also, enterprises are asked to exclude sales tax and VAT from their figures for sales, but not excise duties.

Recommendations:

1. *Convert the imports of goods to an f.o.b. valuation.*
2. *The NASU should seek to clarify the treatment of taxes in the 2005/06 economic survey.*

2.4.2 Recording is done on an accrual basis.

Transactions and flows are recorded on an accrual basis and work-in-progress is allocated to the period in which it is produced. However, all government transactions are recorded on a cash basis. Consequently, data for taxes and subsidies on products are also recorded on a cash basis. However, they could be converted to an accrual basis by identifying the average period between when they accrue and when they are actually paid.

Recommendation: The NASU should develop a methodology for converting the taxes and subsidies on products to an accrual basis.

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.

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.

In compiling the annual benchmark estimates for the national accounts, the last of which was done for 1994/95, the CSO uses some of its own internal data system for prices, merchandise trade, and industrial statistics. The NASU also operates its own surveys of enterprises. Unfortunately, due to resource constraints, the Annual Enterprise Survey (AES) has not been undertaken for any year since 1994/95. This is the reason why there is not a more recent set of benchmark data. Consequently, the main source for annual enterprise data is the quarterly Survey of Recent Trends (SRT) to large enterprises, and a new AES for 2005/06 has recently been sent out. The results of this survey will be used to construct a new benchmark set of GDP estimates. For some specific activities, the CSO uses administrative sources, including the BoB, the MFDP, the Ministry of Agriculture (MOA), the Ministry of Minerals, Energy, and Water Affairs (Department of Mining), and other government bodies. The overall data collection system is comprehensive, except for coverage of very small enterprises with fewer than five employees.

The CSO Industrial Statistics Unit maintains the Enterprise and Establishment Register (EER) used to select the enterprises that are surveyed. The EER was originally populated using information provided by a number of bodies, including the Registrar of Companies and the Registrar of Societies and Councils. The EER is being updated continuously using the records of the Ministry of Commerce, Ministry of Labor, the Public Procurement and Asset Disposal Board, the Ministry of Works, Transport, and Communications (Department of Road Transport and Safety), and the MFDP (Department of Taxes).

The CSO dispatches a business review form to newly registered enterprises to complete the EER. This would appear to be a comprehensive procedure for recording all formal businesses when they are set up. Unfortunately, the register may contain a number of dormant enterprises, those that have ceased to exist, or that have registered but not commenced operations. Returned mail (to detect closed businesses) and newspaper advertisements (to detect new enterprises) are monitored. The other CSO collection systems also report any new or ceased businesses that they identify.

The EER covers approximately 43,000 establishments and contains information on the company's name, location, telephone number, date of registration, type of activity, and employment size. Clearly, unregistered companies are not included in the EER, which is a particular problem for the construction sector. The CSO is currently undertaking a full census

of all businesses operating in Botswana using enumerators to list all active producers in their allocated area. This listing then will be used to derive the details required for the EER.

The collection program for most market activities consists of the AES, which was last run for 1994/95, and the quarterly SRT—both of which utilize the EER. For the AES, questionnaires are sent to all large enterprises with 50 or more employed persons, and to a sample of medium-sized businesses (20–49 employees) and small (5–19 persons) operations. The general approach for the sample selection for the medium and small enterprises in each industry is to apply an interval sample to the EER. Enterprises with fewer than five employees are not generally included in the surveys, unless they are known to dominate a specific industry, such as real estate companies. Thus, small-scale activities are not well covered. However, the survey coverage of activities, in terms of value added, is satisfactory because enumerated establishments account for about 68–75 percent of GDP. The CSO sometimes uses the Department of Taxes records to fill in nonrespondents' questionnaires. Selection for the SRT is also based on an interval sample, but only of large enterprises.

Data on agriculture are compiled by the MOA and cover traditional farmers operating on communal land, as well as commercial farmers. The data are based on estimates of field use, supported by mailed questionnaires. Data are collected for a range of activities, including livestock numbers and sales values, crop production and revenue, and sources of income.

Data for household final consumption come from periodic household income and expenditure surveys (HIES). The last HIES covered the period June 2002 to August 2003 and sampled 6,053 households (representing 1.5 percent of the total number of households in Botswana). It used a robust sample design, conforming to best international practice, to ensure comprehensive coverage. The results of the HIES are also used to derive the weights for the consumer price index (CPI).

Quarterly data for central government are obtained from the MFDP. Data for local government are not available on a timely basis. The latest year for which final outturn figures are available is 2002/03.

Imports and exports of goods are obtained from the CSO's foreign trade statistics database, while for services the balance of payments compiled by the BoB are used. The CSO's Trade Statistics Unit (TSU) processes external trade data, in ASCII format, using the Common Customs Area (CCA) form for merchandise trade transactions within the SACU and the bills of entry for all other (non-SACU) merchandise trade transactions. EUROTRACE software is used to generate statistical outputs. There are concerns as to the reliability of some of the significant exported goods. The BoB gets some data directly from the relevant companies and has suggested that the TSU should use these figures. Unfortunately, the data collected by the BoB do not include all the details required by the TSU. To overcome this problem, the TSU is planning to approach the companies themselves to obtain all the details it requires.

This should be discussed with the BoB to try to avoid putting excessive demands on the companies. The issue of disclosure will also need to be cleared with the companies.

The main price index used to derive the volume estimates of GDP is the monthly CPI. Other specific price indices are used for some activities. The CSO no longer compiles a producer price index (PPI) because the old PPI was not considered reliable. In fact, even when it was being compiled, it was not used in national accounts for this reason. This is unfortunate, since for manufacturing, the PPI is a much more suitable deflator than the CPI. However, since the beginning of 2006, the SRT has been collecting data on quantities from goods-producing enterprises. Unfortunately, some problems have been identified with the quality of these data.

Recommendations:

1. *Undertake comprehensive surveys of enterprises every few years, at least.*
 2. *Liaise with the BoB to ensure that reliable data can be obtained for exports while limiting data demands on the businesses and addressing the issue of confidentiality of the data.*
 3. *Continue to work to improve the quality of the data on quantities collected through the SRT.*
- 3.1.2 *Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.*

The source data usually conform to the requirements of national accounts, but data from some sources cause problems. The cash-recording basis of the government figures is not in accordance with the accrual accounting requirements of national accounts. The data on imports and exports of services are only available for calendar years. This does not even conform to the July–June reporting year used for the national accounts. Coverage of the national accounts is good; the only significant activity not currently represented relates to the informal sector.

Recommendation: Consult with data suppliers to try to get source data more suited to the requirements of the national accounts.

3.1.3 *Source data are timely.*

The CSO surveys are subject to long delays due to low response rates. This is compounded by the NASU's target of a minimum of 60 percent response rate. Other source data are usually available on a sufficient timely basis for the compilation of the estimates.

Recommendation: Continue to work on improving response to surveys.

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.

Random post enumeration checks are usually undertaken for the CSO surveys, mainly by supervisors. Since random sampling techniques are not used for the CSO surveys, sampling errors are not known. Information is not available for nonsampling errors or nonresponse rates. Figures for nonresponding enterprises are imputed, based on the data for other enterprises in the same economic activity or by reference to tax records for large or important firms. The data for each enterprise are compared with previous values. Any unusual values are confirmed with respondents.

Most of the source data are not subject to revisions. However, when this does occur, the reason for the revision is identified. Such revisions are incorporated into the figures for the next release. All source data are subject to computer and visual checks.

Recommendation: Monitor nonsampling errors and rates of nonresponse.

3.3 Statistical techniques

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

The computer programs ensure there are no processing errors. No adjustments are made to unit records without checking with the respondents. Imputations for nonresponse are based on the data for related establishments. Data are compared with that for similar businesses, and unusual values are queried with the respondents.

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

The detailed methodologies used to compile the 1994/95 benchmark estimates are not known by the NASU staff, even though the head of the NASU at the time still works in the CSO. This is troubling in itself, but it will also make it difficult for the existing NASU staff to compile the new 2005/06 benchmark figures in a consistent way. Also, owing to a lack of knowledge of the methodology and because of staff constraints, only the GDP estimates measured from the production and expenditure approaches have been compiled after 2001/02.

In the existing estimates, no specific adjustment is made for the informal sector. However, the 2002/03 HIES collected information on informal activities undertaken by households. It should be possible to use these data to derive a reasonable estimate of the size of the informal sector.

Production approach procedures

Estimates of output and intermediate consumption are compiled at the three-digit BSIC level. The current estimates are derived by extrapolating forward the 1994/95 benchmark estimates using the results from the quarterly SRT. This is far too long a period to use benchmark figures. However, the CSO has now dispatched a new AES for 2005/06, which will be used to obtain a new benchmark.

Output of owner-occupied dwellings is valued as the estimated rentals that tenants would pay for similar accommodation. Work-in-progress is not applied to agriculture and livestock because of the risk of including unreliable estimates for the current year. Inventory valuation adjustments are not made, owing to resource constraints and the lack of information on the valuation methods used by enterprises. Consumption of fixed capital was derived using the perpetual inventory method, in line with *1993 SNA*. Unfortunately, as noted above, these estimates have not been compiled using this methodology for periods after 2001/02. All the government data are on a cash rather than accrual basis.

The lack of suitable price indices, such as the PPI, means that components of the CPI have to be used for many industries. Therefore, the same price has to be used to deflate intermediate consumption and gross output. Volume estimates for taxes *less* subsidies on products and trade margins are estimated by applying the base-year rates to the corresponding volume estimates, as recommended in the *1993 SNA*. The volume figures for GDP are compiled at 1993/94 prices, which is far too long ago.

Expenditure approach procedures

Estimates for central government final consumption are obtained by subtracting receipts of fees and charges from gross output. The rate of growth of the local government component is assumed to be the same as that of central government for the years in which no local government data are available.

The estimates for gross fixed capital formation are derived separately for construction, and machinery and equipment. The gross output of construction is estimated by dividing value added at current prices for each year by 0.3, which is the ratio of value added to gross output for the construction industry in the 1994/95 benchmark estimates. Only 70 percent of the resulting value is allocated to gross fixed capital formation, because 30 percent of the gross output in construction is for repair and maintenance. Estimates for machinery and equipment

are derived from imports less reexports for Chapters 82, and 84–89 of the Harmonized System of Trade Classification of Botswana, i.e., those items considered to be capital goods.² Adjustments are made for trade and transport margins using ratios derived from the 1994/95 benchmark figures.

The results of the 1993/94 HIES were used to derive independent estimates of household final consumption for the benchmark year. This figure has been used as a benchmark for the estimates of the later years. This figure has been extrapolated forward using retail sales surveys and imports of consumption goods and the output of the agricultural industry. There is a problem in that the resulting figures look odd. For all years, including the 1994/95 benchmark, the value for household consumption is not much higher than the corresponding estimates for each of government final consumption and gross fixed capital formation. Unfortunately, without the methodology used for the 1994/95 benchmark, as noted above, this cannot be resolved. However, the results of the 2002/03 HIES could be used to derive independent estimates for that year.

The “other” component of changes in inventories is estimated as a residual, except for benchmark years when actual values are available from the AES. That is, for nonbenchmark years, total GDP from the production side is also used as the total for expenditure approach. Then, other inventories are simply calculated by subtracting the other expenditure components from the total. The NASU also publishes a series for “errors and omissions.” For benchmark years, this is derived as the difference between GDP measured from the production approach and the independently derived expenditure figures. All that is included in this series for other periods are occasional totally arbitrary values. Therefore, it would be better to record zeros in this series for all periods other than benchmark years.

The NASU publishes a detailed breakdown of the expenditure components. Unfortunately, the methods used to derive estimates for nonbenchmark years do not warrant such breakdowns. This is because each component of, say, household final consumption is extrapolated forward using exactly the same factor as is used for the total.

No attempt is made to derive estimates for valuables—expenditures on items that are considered stores of wealth, such as jewelry and works of art. This is quite common since it is extremely difficult to obtain appropriate source data for these items.

² For Chapter 87 (motor vehicles), only a proportion (plus a 20 percent trade and transport margin) enters capital formation; the remaining is for household and intermediate use. For the other chapters on capital goods, a 12.5 percent markup is added for trade and transport margin.

In general, the CPI is used to compile volume measures of the expenditure components of GDP, as is the case for the production figures. For consistency with the current price figures, other changes in inventories for nonbenchmark years should be derived by residual.

Specific quarterly compilation techniques

For the years since the 1994/95 benchmark, annual GDP estimates are derived by simply adding up the quarterly values. Therefore, no need exists to apply any benchmarking procedure. However, this will be necessary once the new annual figures for 2005/06 have been derived. Fortunately, the NASU is familiar with the recommended Denton technique to be used in this case. This is likely to change the GDP estimates back to the 1994/95 benchmark.

The quarterly series are not currently seasonally adjusted, but the NASU plans to do so when resources permit.

Recommendations:

1. *The methodology used to derive the benchmark estimates for 1994/95 must be fully documented.*
2. *The NASU should attempt to derive an estimate of the size of the informal sector—this will probably require technical assistance.*
3. *The figures for changes in inventories should be adjusted to remove holding gains/losses.*
4. *Resurrect the perpetual inventory method for compiling estimates for consumption of fixed capital.*
5. *The base year for the volume figures for GDP should be updated at least every five years.*
6. *Investigate the apparently low figures for household final consumption by deriving independent estimates using the 2002/03 HIES.*
7. *Do not include values for errors and omissions in nonbenchmark years, and derive values for other inventories by residual.*
8. *Once the benchmark GDP estimates for 2005/06 have been derived, the quarterly series should be linked to these values using the Denton technique.*
9. *Seasonally adjust the quarterly GDP estimates when resources permit.*

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information where applicable.

Intermediate data for significant activities, such as mining, are assessed against related indicators, such as volume and price trends. However, in many cases there are no independent estimates that can be used in such checks.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

No established procedure exists for checking for discrepancies. However, ad hoc assessments are undertaken, but usually only after discrepancies have been identified.

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

The provisional estimates of GDP have no statistical discrepancy since there is a residual item for GDP by expenditure. In the comprehensive national accounts estimates, net errors and omissions are shown explicitly. SUTs are no longer constructed, owing to resource constraints.

3.5 Revision studies

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

The magnitude of any revision is monitored, but studies and analyses of revisions are not conducted.

Recommendation: Instigate a regular program of revision studies when resources permit.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

There are annual GDP estimates at current and constant prices for both the production and expenditure figures. Quarterly GDP estimates at current and constant prices from both the production and expenditure approaches also are disseminated, as encouraged in the General

Data Dissemination System (GDDS) and prescribed in the Special Data Dissemination Standard (SDDS).

4.1.2 Timeliness follows dissemination standards.

Provisional estimates for annual GDP are disseminated with a timeliness of eight months as part of the budget speech to the national assembly. This meets the core indicator timeliness (six to nine months) of the GDDS. In terms of the GDDS core framework, the latest comprehensive set of national accounts was disseminated in March 2000 for the reference year 1994/95—a lag of almost five years.

Quarterly estimates of Botswana's GDP also have been published, but only for the years 1993/94 to 2002/03. The CSO had hoped to regularize the dissemination of the quarterly estimates and planned to meet the timeliness requirement of three months (as prescribed by the SDDS) by mid-2002. Unfortunately, as noted above, this still has not happened. On the other hand, the figures have been put together for later quarters right up to the June quarter of 2006, but the figures still need to be evaluated. Once this has been done, these figures can be published. Also, with some additional staff resources it should be possible to meet the SDDS prescription for timeliness.

Recommendation: Put the compilation of quarterly GDP estimates on to a regular basis, ideally meeting the SDDS prescription for timeliness.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

For the estimates of GDP in nonbenchmark years, the production and expenditure figures are not derived independently, and consistency is attained by deriving a residual item on the expenditure side. For the comprehensive set of annual national accounts for 1994/95, the statistical discrepancy between the production and expenditure estimates was small.

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

The GDP estimates are available at current prices for 15 years without breaks. The CSO adjusts back series to account for methodological developments and also, as far as possible, to avoid discontinuities arising from changes in data sources. Unusual changes in economic trends are explained in the hard copy publications.

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

Differences in the reporting periods, used for the major statistical frameworks, limit the ability to reconcile these datasets. For instance, total net lending/net borrowing from the national accounts is not exactly the same as the current account balance plus the capital account balance from the balance of payments. Also, the value of external transactions in the expenditure figures for GDP is different from the corresponding current account components of the balance of payments. In addition, comparisons are affected by the fact that the statistical frameworks are at different points in their adoption of international standards.

Recommendation: Work with other statistics producers to improve consistency between the various systems.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

Dissemination of the first set of annual national accounts estimates for a year, together with revised figures for the previous year's estimates, is made as part of the budget speech to the national assembly. Subsequent changes can be made to reflect changes to source data and changes in methodology. Details of the major changes are noted in the relevant publication. However, these revisions do not follow a regular pattern. In fact, these estimates are all shown as provisional until the next benchmark year is introduced.

Recommendation: Establish and publish a formal revision policy for national accounts statistics.

4.3.2 Preliminary and/or revised data are clearly identified.

The provisional status of the estimates is identified in footnotes to the tables.

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

Formal measurement and analysis of the differences between preliminary and final data are not conducted. However, individual revisions are investigated, but the results are not published.

Recommendation: Once a regular program of revision studies has been implemented, publish the results.

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).*

Detailed breakdown of the national accounts is disseminated. The annual national accounts, disseminated in the CSO's publication *National Accounts of Botswana*, includes 21-year time series. More up-to-date GDP estimates, covering an 11-year period, are published in the CSO's *Statistical Bulletin*. A 7-year annual time series is disseminated on the CSO's website. Hard copy publications include an executive summary that highlights current period developments. The quarterly national accounts also are published in quite a lot of detail, containing time series of six to nine years, depending on the table. Both publications contain an analysis of the results, incorporating charts and diagrams. Some users have expressed the need for calendar-year figures. This could be done easily for the quarterly publications by showing calendar-year totals as well as those for the July to June year.

Recommendation: Include calendar-year totals in the quarterly national accounts publications.

5.1.2 *Dissemination media and format are adequate.*

The annual GDP estimates are first released as part of the budget speech presentation via the publication of the *Annual Economic Report* by the MFDP. The estimates then appear in the next publication of the CSO's *Statistical Bulletin*. More comprehensive national accounts estimates are published in the *National Accounts of Botswana*. However, the latest version of this publication, covering the years 1974/75 to 1994/95, was released in March 2000. More recent figures are included in the *National Accounts Statistics of Botswana: Quarterly Gross Domestic Product 1993/94–2002/03*, which was published in September 2004. These data are also included on the CSO's website. However, the existing policy is only to put them on the website after the hard copy publications have been released. These dissemination lags could be minimized by the adoption of a policy of electronic dissemination on the CSO's website as soon as the data are publishable. Additionally, internally produced information releases could be disseminated for those users without access to the website. Users also exhibit interest in having the data on the CSO's website in downloadable Excel format.

Recommendations:

1. *More use should be made of the CSO's website and in-house information releases to disseminate data on national accounts as quickly as possible.*

2. *The data on the CSO's website should be in downloadable Excel format.*

5.1.3 *Statistics are released on a preannounced schedule.*

Because the annual national accounts estimates are first released in the budget speech presentation to the national assembly in February, the announcement of the date on which the budget speech is to be made approximates a preannounced release date. However, the CSO also publishes an annual hard copy wall calendar that identifies the expected statistical outputs for each month of the following year, but precise, or even approximate, release dates are not given. Neither is the listing of expected monthly outputs included on the CSO's website. The months when the quarterly GDP estimates were due to be published are shown on the wall calendar for 2006. Unfortunately, due to resource constraints, no quarterly GDP estimates have been published this year.

Recommendation: The CSO should work toward producing an advance release calendar giving the actual dates when the national accounts will be published. This release calendar should be published and included on the CSO's website.

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

The first set of GDP estimates, released as part of the presentation of the budget speech to the national assembly, is widely reported in the media.

5.1.5 *Statistics not routinely disseminated are made available upon request.*

Detailed but nonconfidential data are made available on request. However, users are not informed of the availability of this service.

Recommendation: Provide details of the availability of additional data in the publications and on the CSO's website.

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.*

A comprehensive document on sources and methods is not available. A brief (eight to ten pages) description of sources and methods is contained in every publication.

Recommendation: Produce and publish a detailed methodological guide when resources permit.

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

Methodological notes are provided in the appendices of dedicated national-accounts hard copy publications but are not available on the CSO's website. Neither is there a hyperlink to the DSBB.

Recommendation: Include all available metadata on the CSO's website and provide a link to the DSBB.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

A named contact person (including e-mail address and phone number) for the national accounts is given in the latest quarterly GDP publications.

5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.

A list of recent publications and forthcoming releases is given on the CSO's website and in each publication. The cost of the publications is stated, as well as information on how they may be obtained.

Table 1. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts Statistics
(Compiling Agency: Central Statistics Office)

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 <i>Statistics Act</i> is being revised and will give greater responsibility to the government statistician and the CSO in the collection, production, and dissemination of statistics (short term). A new office is to be established once the <i>Statistics Act</i> is approved (short term).	
0.2 Resources			X			Not enough staff to operate existing program.	
0.3 Relevance				X		No review of work programs.	
0.4 Other quality management							
1. Assurances of integrity							
1.1 Professionalism		X					
1.2 Transparency			X			No statement on prerelease access on CSO website and incomplete on DSBB.	
1.3 Ethical standards		X				Any revisions and change in methodology will be made available to all users in advance (medium term).	
2. Methodological soundness							
2.1 Concepts and definitions						Not yet fully consistent with the 1993 <i>SNA</i> .	
2.2 Scope			X			Not all of the recommended accounts and tables are published.	
2.3 Classification/sectorization				X		Institutional sectors based on 1968 <i>SNA</i> ; ISIC 3-based industrial classification has not been implemented; other major classifications have not been adopted; incorrect classification of SACU receipts.	

Table 1. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts Statistics
(Compiling Agency: Central Statistics Office)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment			Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO		
2.4 Basis for recording			X		Imports are not recorded f.o.b.; new survey forms may not allow correct treatment of taxes; all government figures are on a cash basis.	
3. Accuracy and reliability						
3.1 Source data			X		Enterprise survey to collect annual data is not run every year; response to enterprise surveys is quite poor.	Implement a comprehensive AES to provide a current benchmark for the QNA as well as a basis for rebasing the constant price estimates (short term).
3.2 Assessment of source data			X		No information on nonsampling errors or nonresponse rates.	
3.3 Statistical techniques			X		Lack of information on how the 1994/95 benchmark estimates were compiled; no estimates are made for informal activities; the base year for the volume estimates is still 1993/94; arbitrary values have been included in the series for errors and omissions for some years; the figures for changes in inventories are not adjusted for holding gains/losses; the quarterly GDP estimates are not seasonally adjusted.	Revise the national accounts operational manual once the 1993 SNA is successfully implemented (medium term); redevelop worksheets for the national accounts and prepare a QNA operational manual (short term).
3.4 Assessment and validation of intermediate data and statistical outputs			X		Checks done, but only after discrepancies are identified.	
3.5 Revision studies			X		Individual revisions are investigated, but studies and analyses of revisions are not undertaken.	

Table 1. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts Statistics
(Compiling Agency: Central Statistics Office)

Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
4. Serviceability							
4.1 Periodicity and timeliness		X				Disseminate comprehensive national accounts statistics with a time lag of less than two years (medium term); regularize the dissemination of quarterly national accounts (current and constant prices) with a lag of three months (short term).	
4.2 Consistency			X		Some inconsistencies with data from other agencies.		
4.3 Revision policy and practice				X	No formal revisions policy; details of investigations of revisions not published.		
5. Accessibility							
5.1 Data accessibility			X		Actual release dates not given in CSO calendar; users are not informed of the availability of nonpublished data.	Use newspapers and other media to inform the public in advance about the availability of data; the public should also be made aware of the date and time when the data can be accessed on the website (medium term).	
5.2 Metadata accessibility			X		Only a relatively short methodological guide is published.	Prepare a revised sources and methods document and a revised format for the quarterly national accounts publication (short term).	
5.3 Assistance to users				X			

II. 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 Central Statistics Office (CSO), a department of the Ministry of Finance and Development Planning (MFDP), operates within the legal framework of the *Statistics Act (1967)* (the *Statistics Act*). Under the provisions of the *Statistics Act*, the MFDP defines statistical policy through its permanent secretary, while the government statistician (the head of the CSO) programs the operations of the CSO. The *Statistics Act* authorizes the collection of source data for the compilation of the consumer price index (CPI), subject to the provisions of the *Statistics Act* and the direction of the minister of the MFDP. The government statistician is responsible for the collection, tabulation, analysis, and publication of these statistics. The *Statistics Act* also stipulates that published statistics should be laid before the national assembly within 14 days of their release.

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

Problems occurred in the past with the receipt of data from other government agencies, particularly with the timeliness of their delivery. Thus, through a joint initiative together with the (BoB) and the MFDP, a Statistics Producer Committee was established, made up of representatives from all the major data-producing agencies. This committee meets three times per year and has been very effective in resolving any problems concerning the sharing of data. The 2001 Report on the Observance of Standards and Codes (ROSC) mission identified a problem with the supply of breakdowns of the data on trade in services from the BoB, but this has since been resolved.

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

All persons employed in the execution of any duty under the *Statistics Act* are required to sign a declaration of secrecy on entry. This provision also applies to non-CSO staff, including consultants. Breaches of this provision and the use of insider information for personal gain are offenses punishable by the payment of a fine and/or imprisonment.

The introduction of new or revised statistical enquiries have to be advertised in the *Gazette* and are subject to statutory regulations. The questionnaires used to collect data for the CPI all contain a statement on confidentiality. This stipulates that the CSO cannot publish

information relating to an identifiable business without first getting the written permission of that business. It also states that the data will be treated in strict confidence and used for statistical purposes only. It further states that the data will be published only in aggregate form. However, it does not specify the actual aggregation rule used, and neither is there a formal statement on this within the CSO. Fortunately, the staff is well aware of the need to avoid indirect disclosure of individual data by publishing figures covering only two or three businesses. The confidentiality statement on the questionnaires also states that the provisions are not affected by any other legislation.

Unit records are sometimes provided to researchers, but all identification details are removed before this is done. Respondents' data forms are always kept under lock and key and can only be accessed by authorized staff. Forms for disposal always are shredded onsite. Rooms always are locked when empty, because the CSO building cannot be secured fully. All computer systems are protected by passwords.

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

Statistical reporting is ensured through legal mandate. Refusal or neglect to provide information, or making untrue statements, are offenses subject to the payment of a fine and/or imprisonment. However, the CSO always tries to use persuasion to obtain response, rather than the legal approach. The *Statistics Act* gives the CSO the power to obtain particulars in respect of any statistical collection carried out under the *Statistics Act*. The CSO also can access all public or other records, if approval of the minister has been obtained. However, the authorizing officer has to comply with any oath of secrecy prescribed by the agency involved. The CSO does not have the right to inspect books and records, premises, and inventories of businesses or persons in cases of noncompliance. A contact telephone number is included in the questionnaires for anyone who has a question or needs assistance.

0.2 Resources

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

The CSO's Prices Statistics Unit (PSU) has a staff of four, consisting of the unit head and three statisticians. The CSO also has regional offices, which provide additional support for the collection and data entry of the CPI. The number of staff is not considered sufficient for the established work program. However, government constraints mean that it is difficult to increase the number of staff working on prices without adversely affecting some other activity. The four staff and the support and data entry staff of the PSU seem to be adequate, with a fair mix of professionals and nonprofessionals. The staff does have some opportunities for training, such as the IMF's price training course in Washington, D.C. and other regional

and European courses. Civil service salary levels are low compared to the private sector, causing problems for the CSO in recruiting new staff and, in particular, in retaining staff. A restructuring plan for the MFDP, currently under consideration, may give more autonomy for the CSO. This could resolve the restrictions on recruitment and salary levels.

Computer resources are quite good because getting the finance for improvements in this area is not as restricted as it is for staff recruitment and salary levels. For this reason, there is a regular program for updating PCs. The CSO plans to replace the servers supporting the network. A problem currently exists with developing in-house software. However, the CSO has obtained approval to recruit three new programmers to assist with this work. It also has obtained approval to set up a back-up facility in one of the regional offices. This also could be used to store offsite backups of the data.

Working facilities are a bit run down and overcrowded. Occasional problems arise with getting the right transport vehicle for a particular job from the government agency supplying this service, but, in general, this operates satisfactorily. Except for the restriction on recruitment and salary levels, funding for the statistical program is adequate.

Recommendation: Find some means to increase the number of staff working on prices.

0.2.2 Measures to ensure efficient use of resources are implemented.

All staff undergo an annual performance review. There were also staff perception surveys in 1998 and 2004. These allowed staff to make their views known anonymously on a wide range of issues. Wherever possible, these views were used to generate improvements in practices. Line managers are responsible for ensuring the efficiency of their work programs.

0.3 Relevance

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

The CSO established annual meetings of users to gain insight into their views on statistics. Unfortunately, the CSO did not find these meetings helpful, since users were not forthcoming with their views. Consequently, they set up a reference group comprising senior government and private users for each subject area; and they solicit their views whenever a significant change is being considered.

The CSO staff is active in international meetings and seminars, particularly those organized by The Southern African Development Community (SADC) Statistics Committee.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The CSO management is committed to data quality and cascades this concern down through the ranks. A vision and mission statement are prominently displayed around the office. Although no formal training is offered for staff, supervisors actively promote quality issues. Given resource constraints, an active program to improve efficiency in work processes exists. Such reviews pay due consideration to quality to ensure that this does not suffer.

0.4.2 Processes are in place to monitor the quality of the statistical program.

Managers regularly monitor work processes; for example, supervisors check the work of their team. Also, the computer systems have built-in checks on all aspects of data capture and processing. A technical working group reviews all new questionnaires. However, it does not review the other work processes.

Recommendation: Extend the activities of the technical working group to cover work processes.

0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.

Consideration is always given to the trade-off between accuracy and timeliness.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

The *Statistics Act* supports professional independence by clearly stating and recognizing the statistical functions of the CSO. Section 3 of the *Statistics Act*, , details the statistics that may be collected at such times, in such places or areas, and in respect of such periods as may be prescribed.

The CSO, while not autonomous, clearly advocates the credibility of statistical results and fully understands the importance of noninterference from other government agencies. The CSO government statistician reports to the permanent secretary of the MFDP on administrative matters but to the parliament and the minister of the MFDP on professional matters.

With regard to professionalism, all job descriptions are transparent, detailed, and specific in the level of qualifications. Vacancies are filled through advertisements, and potential candidates are interviewed by a panel that comprises authorities from the MFDP and the CSO.

The CSO provides formal and on-the-job training in the methodology and compilation methods, including participation in seminars, courses, and workshops arranged by the SADC, the regional authority on statistics.

The CSO encourages staff to subscribe to the *African Statistical Journal*, although they are not encouraged to research and write analytical papers for journal publications. Because they are government employees, their contribution could cause a conflict of interest. The CSO considerably encourages staff to submit research papers to the publicly available MFDP newsletter.

In seeking to promote and maintain the CSO's reputation for professionalism, the internal technical working group encourages research and analysis, including the rationale for the choice of methodologies.

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

The CSO's choices of source data for compiling and disseminating the CPI are determined by the availability of basic statistics and data from administrative records according to criteria of statistical reliability, coverage, and consistency. Hence, the choice of source data and statistical techniques primarily is based solely on statistical considerations, and decisions about the timing, media, and other aspects of dissemination are based on statistical considerations. No evidence of political or government interference exists in the choice of data sources and statistical processes used in compiling the CPI.

Section 8 of the *Statistics Act*, requires that official statistics be published. The CPI and the wholesale price index (WPI) are simultaneously disseminated to all users. Political approval is not needed to publish statistical information. The CSO maintains a mailing list used for transmitting statistics to users. This mailing list is updated regularly.

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

The government statistician is responsible for responding to any erroneous interpretation and misuse of the CPI. Incidences of inappropriate interpretations and misuse of statistics have been clarified immediately.

1.2 Transparency

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

The *Statistics Act*, in English, is available to the public on the CSO's website, on the IMF's Dissemination Standards Bulletin Board (DSBB), and in publications of the laws of Botswana. All statistical publications identify where to find more information about the CSO and its products. Thus, the contact persons, postal addresses, telephone numbers, facsimile numbers, e-mail addresses, and other relevant information of interest are available.

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

Information on prerelease access to the CPI is documented on the DSBB but not on the CSO's website. According to the DSBB, there is no internal government access to price statistics prior to their release.

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

The CSO estimates and releases all price statistics. All the publications display the CSO logo (on press releases, in hard copy publications, and on the website). In all statistical publications, the public is informed that attribution is required. Moreover, in cases of joint publication, the CSO is clearly identified as the data-producing agency.

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

Whenever revisions or changes in methodology occur, reference groups of major stakeholders are constituted for members to be made aware of such changes. Details of changes in methodology are included as appendices to statistical reports. In the case of new surveys, the CSO warns users well in advance that there will be changes.

1.3 Ethical standards

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

The *Statistics Act* provides clear guidelines for correct behavior when the CSO or its staff is confronted with potential conflict-of-interest situations. Thus, all persons employed in the execution of any duty under the *Statistics Act* (or any regulation made thereunder) are required to sign a declaration of secrecy on entering upon duty. This provision of the *Statistics Act* also applies to non-CSO staff, including short- and long-term consultants.

Breaches of the oath of secrecy and the use of insider information for personal gain are offenses punishable by payment of a fine, imprisonment, or both.

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.

Concepts and definitions, which have been developed locally, are broadly in line with international standards, guidelines, or good practices. Household expenditure estimates from the Household Income and Expenditure Survey (HIES) are used for the weights of market expenditure on goods and services. The CPI is classified according to the Classification of Individual Consumption by Purpose (COICOP), which conforms to the guidelines of the *System of National Accounts 1993 (1993 SNA)* and the *Consumer Price Index Manual, 2004 (CPI Manual)*. This CPI was rebased in November 2006 (2006 =100).

However, the concepts and definitions for the CPI deviate from the *1993 SNA* with respect to the imputation of rents for owner-occupied housing. See 2.2.1.

2.2 *Scope*

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

All resident households, regardless of income, are included in the CPI, which is stratified according to cities and towns, urban villages, and rural villages. Owing to the lack of information on informal activities, no informal activity is included in the CPI weights that cover the expenditures of all resident households in the country.

Botswana's CPI does not cover owner-occupied housing in either of two ways: as consumption of housing services, or as capital formation in (acquisitions less disposals of) housing units.

Recommendation: The CPI should cover owner-occupied housing.

2.3 Classification/sectorization

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

The CPI covers noninstitutionalized Botswana households that are consistent with the 1993 SNA household sector. The item weights for the CPI are classified using the COICOP that is consistent with international guidelines.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The prices reflect those that a consumer would pay on the day of the survey, including value added, excise taxes, trade, and transportation margins. Cash payments are the basis for the price survey; credit card payments are excluded.

Price-determining characteristics for specifications and transactions are taken into consideration in order to support pricing of constant quality.

2.4.2 Recording is done on an accrual basis.

Prices are collected for the first two weeks of the month. Discounts and sale prices are recorded in case of temporary reductions.

Prices for most items are collected once a month and are included in the CPI for that month. Prices for two items—private rent for one-room accommodation and domestic servant's wage—are collected only through quarterly surveys in Gaborone and Francistown. Therefore, these prices are used for each of the three months following the survey month, which is the last month of each quarter. According to the 2002 ROSC, there were plans to convert these into monthly surveys at the time of the next rebasing. But with the new rebasing, using the 2002/03 weights, these plans have not been realized.

Administratively set prices are used for services like public school fees, which includes the cost of text books, uniforms, and other educational fees.

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

Weights are not applied to the purchases of existing goods such as used cars or for other durable consumption goods for which there are secondary markets.

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.

Sources for CPI Prices: A Business Register is used to supplement a judgmental list of outlets compiled by the PSU.

Misclassifications tend to be problematic for the Business Register, although nonresponse tends not to be an issue for the Business Register since good relations exist between the price collectors and the outlets.

Nevertheless, the means by which closed businesses are purged from the Register is inefficient and may cause duplication of efforts on the part of the PSU staff who have to again verify whether or not the outlet is still in business.

Ad hoc surveys are not conducted to identify new products and provide source data for weights and prices. New products are only introduced when the results of a new HIES become available.

All types of enterprises are represented in the price collection exercise—large, medium, and small. The areas covered are as follows:

Geographic Coverage	Number of Outlets (2006 = 100)
Towns	
Gaborone	175
Lobatse	40
Jwaneng	36
Francistown	100
Selibe-Phikwe	74
Urban¹ villages	
Maun	58
Ramotswa	15
Mochudi	20
Serowe	56
Tutume	37
Moshupa	..
Kanye	22
Molepolole	17
Palapye	51
Mahalapye	32
Tonato	32
Bobonong	41
Letlhakane	47
Tsabong	41
Kasane	41
Gantsi	26
Rural	
Mmadinare	..
Mmankgodi	5
Good Hope	6
Shoshong	..
Letlhakeng	8
Masunga	24
Rakops	18
Nata	19
Sefhophe	24
Pandamatenga	13
Tshesebe	11
Ratholo	12
Werda	10
Sehithwa	9
Kang	6
Mabutsane	5
Artesia	6
Metsimothabe	10
Manyana	4
Pitsane	5
Serule	13
Machaneng	11
Otse	7
Sekoma	4
Sikwane	1
Mmathubudukwane	1
Malolwane	4
Khakhea	13

¹ Urban villages are defined as those villages that have a population of more than 5,000 in 1991, and in addition fewer than 25 percent of the workforce being engaged in traditional agriculture: *CSO Consumer Price Index Manual, 1998*.

The outlets sampled are by purpose. Sampling of outlets is done from the Business Register. Regarding the fieldwork arrangement, price collection in Mahalapye, Shoshong, and areas to the south is covered from the head office in Gaborone, by the PSU staff, while the Francistown Regional Statistics Office covers areas to the north of Mahalapye. Price collectors usually fly to Maun to collect price data.

Approximately 30,820 price quotations are collected from about 1,258 retail outlets for the CPI.

Information from other available sources is used to supplement the core compilation. These sources include (1) Botswana Housing Commission, (2) Botswana Telephone Corporation, (3) Mass Communications, (4) Water Affairs, (5) Import Price Index, and (6) Private Hospitals.

Sources for CPI Weights: According to the *HIES 2002/03 Main Report*, the frame for the 2002/03 HIES consists of 4,114 Enumeration Areas (EAs). The frame was stratified according to (1) cities and towns, (2) urban villages, and (3) rural areas. A stratified two-stage probability sample design was used for the selection of the sample. In the first stage, 288 EAs were selected with probability proportional to size, and in the second stage, 6,053 households were selected. Therefore, a sample size of 6,053 households translated into an estimated coverage of 25,069 persons. The survey was conducted from June 2002 to August 2003.

The 2002/03 HIES estimated that 394,272 households in the country had 1,632,922 persons in 2002/03. The HIES excluded all persons from dwellings that were out of scope and coverage, meaning that all institutional dwellings such as army barracks, hospitals, and training colleges were excluded. Data from imports are used to adjust tobacco and alcohol expenditure.

The HIES included own-account production of market goods for own final consumption; however, it excluded the value of consumption of owner-occupied housing and expenditure on services of illegal market products.

Corrections for sampling error were done as follows: the urban to rural sample ratio was determined on the basis of optimum allocation aimed at minimizing the variance of the estimated average 2002/03 household monthly income. That is, a higher-than-proportional sample of urban households and a lower-than-proportional sample of rural households was used since the urban income/expenditure pattern is more variable than in rural areas.

The time lag between the previous weight update, 1996, and the recent weight update, 2006, is more than the five years considered international best practice. Measures should be taken

to keep the price and weight reference periods close together to facilitate correct CPI estimations.

The HIES questionnaires were subjected to field testing and observation studies. Pretesting was conducted around Gaborone in areas from all three strata.

Meetings are held with consumer groups and the business community only when a significant change has taken place in the CPI methodology, such as rebasing the index.

Regular meetings take place within the SADC forum to exchange views and development about CPIs between member countries.

Recommendation: Develop an accurate Business Register to avoid problems of out-of-business and misclassification. Conduct ad hoc surveys. Include owner-occupied housing in the CPI since 6 percent of the households in the urban areas live in self-built housing. Furthermore, 45.4 percent of households in cities and towns rent housing units. The CPI should be reweighted every five years.

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

The CPI group items are collected from outlets over a two-week period. Arithmetic average prices are used in the price relatives. The PSU collects prices from the first to the second week of the month. Two quarterly surveys are carried out in Gaborone and Francistown to derive average prices: private rent paid by the tenants of one-room accommodation and the average domestic servant's wage. According to the PSU, changes in rents and domestic servants' wages in the two cities are likely to be a reasonable approximation of changes in the rest of the country.

Regarding owner-occupants' consumption of housing services in Botswana, although weighting information is available from the HIES for the implicit rent of owner-occupants, price information from the rental survey is not considered sufficient to produce a reliable estimate of the average change in free-market rental prices for housing units similar to the units of owner-occupants. Further, no alternative estimates are available of the rental values of owner-occupied housing units constructed from the user cost approach. Hence, the implicit rent of owner occupants is not included in the CPI.

Source data are broadly consistent with the definitions, scope, and classification of the CPI estimates.

3.1.3 *Source data are timely.*

The PSU data are timely to allow for compiling of the CPI. Therefore, the CPI is released 15 days after the reference date, exceeding Special Data Dissemination Standard (SDDS) requirements of one 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.*

Whenever refusals arose for the HIES, attempts were made on different occasions to encourage members of the public to cooperate through follow-up visits. For the 2002/03 HIES, no substitution was allowed for nonresponse. There was only a 0.8 percent refusal and 1.1 percent noncontact.

There were no analyses of the sampling errors. Adjustments were made to the HIES for underreporting of specific products such as alcohol and tobacco using imports data.

Sampling errors for price collection are not available since the sampling of outlets is conducted by judgmental selection. Problems of nonresponse are not common for the outlets sampled, owing to the established relationships between the interviewers and the enterprises.

Recommendation: All administrative source data should be routinely assessed and validated.

3.3 *Statistical techniques*

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

A range of price quotes or coding error threshold is employed to minimize processing errors. If any unusual price values appear, the outlet is contacted for price verification.

The prices are first collected and then passed on to the PSU, where the price indices are then tabulated. All datasets are combined, weighted, and aggregated into the national index.

Prices for temporarily missing and seasonal products for the new CPI are estimated by imputing the price. Hence, the PSU uses the change in the related class/group to estimate the missing price. A permanently unavailable product is replaced with a similar item. If possible, the price for the replacement product is spliced onto that of the old product by obtaining the price for the overlap month. Otherwise, the price for the new product is used without any

adjustment for quality differences. According to the PSU, products such as clothing and quality furniture are always changing and are therefore difficult to quality adjust. For the first time, the CPI basket includes a computer, a DVD player, and a digital camera. It is important for the PSU to carefully monitor these products for quality changes when product substitutions are conducted.

New goods are not introduced into the sample as they gain market share. New goods are only introduced when there is a new HIES.

The CPI is derived by short-term price relatives. Aggregates for the new index are based on the modified Laspeyres formula. The 1993/94 weight-based index was linked to the 2002/03 weight-based index. The price reference period is September 2006, and the prices for the weights have been updated. The weight reference period is, therefore, 2002/03, while the index reference period is 2006.

For the CPI, the price ratios are aggregated at the elementary levels for the one-month price change of each of the twelve-item groups in each of the six towns, eleven urban villages, and five rural areas.

Recommendation: Since clothing and furniture are constantly substituted in the index, quality adjustment techniques should be investigated not just for these products but also for the electronic products and consumer durables. Overall, quality adjustment techniques need improvements.

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

Once the PSU receives the completed questionnaires, it visually inspects them for consistency checks. That is, last month's price is compared with the current month's price. Price collectors are asked for an explanation if the price change is over a certain percent.

Additionally, checks are conducted for mistakes such as price quotes written on wrong slots, very high or very low price quotes compared to the previous period price, zero or missing prices, shop deletions, and conversion of prices to the required quantities.

Validations are conducted first by editing the questionnaire, then validating the price reports (after all prices are entered into the computer, a validation report is generated), validating the average prices report, checking the indices, and then generating the final *Consumer Price Statistics* report, which details sections, groups, and "all item" indices for each of all the towns, villages, and rural and national areas.

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 data are not regularly compared to other price index series such as the WPI since the WPI is compiled and disseminated infrequently. GDP deflator estimates are derived only from the CPI; thus it does not make sense for the CPI to be validated against itself. There are no specific price indices for imports and exports.

Recommendation: The CPI should be validated against other price indices such as the WPI and the GDP deflator.

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

The structure of aggregation is straightforward, and breakdowns of the CPI are consistent. The current practice provides logical estimates at the publication level.

3.5 Revision studies

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

The CPI is considered final when released. The CPI basket and weights are updated when there is a new HIES. No revisions are conducted once the index is released, since four validation checks are conducted during the compilation and aggregation of the index. However, studies and analyses of the weight revisions are carried out when there is a new HIES, and are used internally to inform statistical processes.

Notwithstanding this process, several times in recent years the CPI was revised. For example, in 2003 the index was revised twice to reflect methodological changes for housing rentals (July) and telephone charges (October). Other changes have been due to methodology, product substitution, etc. More recently, revisions have been made to prices charged for public school education. In all these cases, analyses and studies were conducted.

4. Serviceability

4.1 *Periodicity and timeliness*

4.1.1 Periodicity follows dissemination standards.

Botswana meets the periodicity and timeliness standards of both the General Data Dissemination System (GDDS) and the Special Data Dissemination Standard (SDDS).

4.1.2 Timeliness follows dissemination standards.

The CPI is published 15 days after the end of the reference month, within the requirements of the SDDS.

The monthly estimates of the CPI are published on the 15th of the following month, therefore meeting—and indeed exceeding—the SDDS requirement of one month after the end of the reference period.

4.2 *Consistency*

4.2.1 Statistics are consistent within the dataset.

The CPI aggregation structure is consistent from the cell level to the item level, the item level to the group level, and the group level indices to higher levels of expenditure classes and the all-item level. Geographical aggregation as well as import and export aggregation are used and are consistent.

It should be noted that consistency in aggregation may not be achieved when the amount of information available on quantities and expenditures is not the same at different levels of aggregation; for example, regional aggregation to national aggregation may not be consistent. This case occurs when there have been missing price observations. The rebased CPI (see 3.3.1) now uses the change in the related class/group to estimate the missing price. Hopefully, this change in methodology, instead of using imputations based on the average price change from the base period to the present period, will minimize inconsistencies in aggregation.

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

Consistent time series are available going back for more than 30 years. Each time new weights are introduced, the historical CPI series can be reconstructed using the new weights.

Linking factors are available on request for users who may want to construct long-time series.

Besides the rebasing of the CPI, the CPI methodology was recently revised to make adjustments to the weights for public school fees. The CSO assumed that school fees were to be paid once, and by all students at the beginning of the year as reflected in the January 2006 release. After consultations with the Ministry of Education regarding the practice on payment plans for school fees, it was established that parents are allowed to pay in installments on a term basis. The total expected revenue reflects that a significant portion of students is likely to be exempt. The CSO has since revised the index series for the period January 2006 to March 2006 to accommodate the practice on payment of school fees in public schools.

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

Since the CPI data are not verified with other datasets such as the WPI, national accounts, and import/export price data, the PSU is unable to determine if the CPI data are consistent with these other datasets.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

Generally, the CPI series is final when first released and is not subject to revisions. The index is revised only when there are major errors in the compilation of the index. Recently, the CPI was revised when the school fees component in the CPI was not adequately weighted. By reallocating the expenditure share of school fees, the weights were distributed to correct the index. Major stakeholders were not aware of the CPI revision until much later. Please see 3.5, Revision Studies.

Whenever weights are revised, users are informed about the process via the Internet, press release, and conferences. The weight revisions are discussed with members of the reference group, which consists of representatives from the private sector, other government agencies, and academia. In the HIES publication, analyses and comparisons between the old and the new HIES are usually stated.

Recommendation: Revision policies and procedures need to be established. Major stakeholders would welcome a regular and transparent schedule of CPI revisions.

4.3.2 Preliminary and/or revised data are clearly identified.

Since the CPI is not revised normally, no need exists to identify preliminary data.

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

Since the CPI data are final when first published, there are no revisions.

For the weight revisions, no studies or methodological notes are produced. Given that the number of price quotes and outlets for the rebased CPI have been significantly increased compared to the 1996 = 100 CPI, notes should have explained the reasons for the increase.

Recommendation: Whenever changes are made in the methodology, weights, etc., analyses and notes should be available to the public.

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).

The CSO publishes well-designed charts and tables to facilitate analysis. The CPI data are generally accessible, and the datasets are published with various levels of disaggregation.

Each news release concerning the dissemination of the CPI includes an assessment or analysis of current period developments. Several hard copy and electronic publications disseminate the price indices with time-series data. No seasonal adjustments of the price indices are conducted.

5.1.2 Dissemination media and format are adequate.

The CPI data are disseminated in ways that facilitate redissemination in the media through official press releases and the Internet. The data are simultaneously disseminated to all interested parties through a monthly press release. Data are also simultaneously disseminated on the CSO's website, <http://www.cso.gov.bw/>.

More comprehensive and/or detailed statistics are also available to the public. Requests for these types of data are usually completed in one day and longer if requests are labor-intensive.

Current price statistics and time-series data going back to 2003 are available on the CSO's website.

5.1.3 *Statistics are released on a preannounced schedule.*

An advance release calendar is posted on the CSO's website, but no release dates for the upcoming year are indicated. Instead, the months in which data are compiled by the CSO are listed.

Recommendation: The CSO should indicate the dates of the data release in an advance release calendar.

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

The CPI is made available to all users at the same time.

5.1.5 *Statistics not routinely disseminated are made available upon request.*

Detailed customized tabulation (detailed breakdowns) of price indices data is available upon request, in addition to the tables routinely disseminated. For specific purposes, customized tabulation of data that satisfy the CSO's disclosure requirements is also available free of charge.

Data users are aware of the availability of additional statistics but not of the procedures for obtaining them.

Recommendation: The CSO should provide explicit procedures or instructions to data users on how to obtain data.

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 CSO's website provides a full description of the IMF's DSBB website, but not a link, that mentions several of Botswana's data categories metadata including the CPI.

Documentation on concepts, scope, classification, data sources, and methods of the CPI is available on the DSBB. These metadata were last updated in May 2006. The *Technical Guide* on the CPI was first published in 1996. A new *Technical Guide* is being drafted. There are, however, no CPI methodological notes on the CSO's website.

Recommendation: Provide up-to-date and pertinent metadata to the public, and either link the Technical Guide to the CSO's website or provide methodological notes on the site.

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

There are no brochures, pamphlets, or newsletters about the CPI on how to locate the data available, besides the news releases posted on the CSO's website. Background papers, working documents, etc., are not available. Nevertheless, on November 18, 2006, an "African Statistics Day, National Strategies for the Development of Statistics" is being planned. This program to market statistics is sponsored by the Economic Commission for Africa and the African Center for Statistics. The theme of the program is "Statistics Planning at the Sources of Dynamic Development." For this program, several brochures, pamphlets, and posters are printed.

Recommendation: The Technical Guide should be posted on the CSO's website.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

All publications give the name, telephone, facsimile, and e-mail of the CPI staff who is available to provide assistance to users.

5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.

A catalog of publications together with their prices is available on the CSO's website. The CSO's quarterly *Statistical Bulletin* also contains a list of the CSO's publications.

Table 2. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Consumer Price Index
(*Compiling Agency: Central Statistics Office*)

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 <i>Statistics Act</i> is being revised which will give greater responsibility to the government statistician and the CSO in the collection, production, and dissemination of statistics (short term).
0.2 Resources			X			Not enough staff to operate the existing program.	
0.3 Relevance		X					
0.4 Other quality management			X			No review of work programs.	
1. Assurances of integrity							
1.1 Professionalism		X					
1.2 Transparency		X					Any revisions and change in methodology will be made available to all users in advance (medium term).
1.3 Ethical standards		X					
2. Methodological soundness							
2.1 Concepts and definitions		X					
2.2 Scope			X			CPI does not cover owner-occupied housing.	
2.3 Classification/sectorization		X					
2.4 Basis for recording		X					
3. Accuracy and reliability							
3.1 Source data			X			There is no current business registry; price information from rental surveys is inadequate.	
3.2 Assessment of source data			X			Administrative source data are not routinely assessed and validated.	
3.3 Statistical techniques			X			Quality adjustment techniques are not adequately applied.	
3.4 Assessment and validation of intermediate data and statistical outputs			X			The CPI is not validated against other price indices.	
3.5 Revision studies		X					

Table 2. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Consumer Price Index
(*Compiling Agency: Central Statistics Office*)

Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
4. Serviceability							
4.1 Periodicity and timeliness		X					
4.2 Consistency		X					
4.3 Revision policy and practice			X			Revision studies and analyses are not made available to the public.	
5. Accessibility							
5.1 Data accessibility			X			Prerelease dates are not indicated on the advance release calendar.	
5.2 Metadata accessibility			X			There are no up-to-date and pertinent metadata to the public, and the technical guide is not posted on the CSO's website.	
5.3 Assistance to users				X			

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria

III. PRICE STATISTICS (WHOLESALE 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 Central Statistics Office (CSO), a department of the Ministry of Finance and Development Planning (MFDP), operates within the legal framework of the *Statistics Act (1967)* (the *Statistics Act*). Under the provisions of the *Statistics Act*, the MFDP defines statistical policy through its permanent secretary, while the government statistician (the head of the CSO) programs the operations of the CSO. The *Statistics Act* authorizes the collection of source data for the compilation of the wholesale price index (WPI), subject to the provisions of the *Statistics Act* and the direction of the minister of the MFDP. The government statistician is responsible for the collection, tabulation, analysis, and publication of these statistics. The *Statistics Act* also stipulates that published statistics should be laid before the national assembly within 14 days of their release.

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

Problems occurred in the past with the receipt of data from other government agencies, particularly with the timeliness of their delivery. The CSO thus set up a Statistics Producer Committee made up of representatives from all the major data-producing agencies. This committee meets every quarter and has been very effective in resolving any problems concerning the sharing of data. The 2001 Report on the Observance of Standards and Codes (ROSC) mission identified a problem with the supply of breakdowns of the data on trade in services from the Bank of Botswana (BoB), but this has since been resolved.

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

All persons employed in the execution of any duty under the *Statistics Act* are required to sign a declaration of secrecy on entry. This provision also applies to non-CSO staff, including consultants. Breaches of this provision and the use of insider information for personal gain are offenses punishable by the payment of a fine and/or imprisonment.

The introduction of new or revised statistical enquiries have to be advertised in the *Gazette* and are subject to statutory regulations. The questionnaires used to collect data for the WPI all contain a statement on confidentiality. This stipulates that the CSO cannot publish information relating to an identifiable business without first getting the written permission of

that business. It also states that the data will be treated in strict confidence and used for statistical purposes only. It further states that the data will be published only in aggregate form. However, it does not specify the actual aggregation rule used, and neither is there a formal statement on this within the CSO. Fortunately, the staff is well aware of the need to avoid indirect disclosure of individual data by publishing figures covering only two or three businesses. The confidentiality statement on the questionnaires also states that the provisions are not affected by any other legislation.

Unit records are sometimes provided to researchers, but all identification details are removed before this is done. Respondents' data forms are always kept under lock and key and can only be accessed by authorized staff. Forms for disposal always are shredded onsite. Rooms always are locked when empty, because the CSO building cannot be secured fully. All computer systems are protected by passwords.

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

Statistical reporting is ensured through legal mandate. Refusal or neglect to provide information, or making untrue statements, are offenses subject to the payment of a fine and/or imprisonment. However, the CSO always tries to use persuasion to obtain response, rather than the legal approach. The *Statistics Act* gives the CSO the power to obtain particulars in respect of any statistical collection carried out under the *Statistics Act*. The CSO also can access all public or other records, if approval of the minister has been obtained. However, the authorizing officer has to comply with any oath of secrecy prescribed by the agency involved. The CSO does not have the right to inspect books and records, premises, and inventories of businesses or persons in cases of noncompliance. A contact telephone number is included in the questionnaires for anyone who has a question or needs assistance.

0.2 Resources

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

The CSO's Prices Statistics Unit (PSU) has a staff of four, consisting of the unit head and three statisticians. The CSO also has regional offices, which provide additional support for the collection and data entry of the WPI. The number of staff is not considered sufficient for the established work program. However, government constraints mean that it is difficult to increase the number of staff working on prices without adversely affecting some other activity. The qualifications of the staff in the PSU seem to be adequate, with a fair mix of professionals and nonprofessionals. The staff does have some opportunities for training, such as the IMF's price training course in Washington, D.C. and other regional and European courses. Civil service salary levels are low compared to the private sector, causing problems

for the CSO in recruiting new staff and, in particular, in retaining staff. A restructuring plan for the MFDP, currently under consideration, may give more autonomy for the CSO. This could resolve the restrictions on recruitment and salary levels.

Computer resources are quite good because getting the finance for improvements in this area is not as restricted as it is for staff recruitment and salary levels. For this reason, there is a regular program for updating PCs. The CSO plans to replace the servers supporting the network. A problem currently exists with developing in-house software. However, the CSO has obtained approval to recruit three new programmers to assist with this work. It also has obtained approval to set up a back-up facility in one of the regional offices. This also could be used to store offsite backups of the data.

Working facilities are a bit run down and overcrowded. Occasional problems arise with getting the right transport vehicle for a particular job from the government agency supplying this service, but, in general, this operates satisfactorily. Except for the restriction on recruitment and salary levels, funding for the statistical program is adequate.

Recommendation: Find some means to increase the number of staff working on prices.

0.2.2 Measures to ensure efficient use of resources are implemented.

All staff undergo an annual performance review. There were also staff perception surveys in 1998 and 2004. These allowed staff to make their views known anonymously on a wide range of issues. Wherever possible, these views were used to generate improvements in practices. Line managers are responsible for ensuring the efficiency of their work programs.

0.3 Relevance

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

The CSO established annual meetings of users to gain insight into their views on statistics. Unfortunately, the CSO did not find these meetings helpful, since users were not forthcoming with their views. Consequently, they set up a reference group comprising senior government and private users for each subject area, and they solicit their views whenever a significant change is being considered.

The CSO staff is active in international meetings and seminars, particularly those organized by The Southern African Development Community (SADC) Statistics Committee.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The CSO management is committed to data quality and cascades this concern down through the ranks. A vision and mission statement are prominently displayed around the office. Although no formal training is offered for staff, supervisors actively promote quality issues. Given resource constraints, an active program to improve efficiency in work processes exists. Such reviews pay due consideration to quality to ensure that this does not suffer.

0.4.2 Processes are in place to monitor the quality of the statistical program.

Managers regularly monitor work processes; for example, supervisors check the work of their team. Also, the computer systems have built-in checks on all aspects of data capture and processing. A technical working group reviews all new questionnaires. However, it does not review the other work processes.

Recommendation: Extend the activities of the technical working group to cover work processes.

0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.

Consideration is always given to the trade-off between accuracy and timeliness.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

The *Statistics Act* supports professional independence by clearly stating and recognizing the statistical functions of the CSO. Section 3 of the *Statistics Act*, , details the statistics that may be collected at such times, in such places or areas, and in respect of such periods as may be prescribed.

The CSO, while not autonomous, clearly advocates the credibility of statistical results and fully understands the importance of noninterference from other government agencies. The CSO government statistician reports to the permanent secretary of the MFDP on administrative matters but to the parliament and the minister of the MFDP on professional matters.

Regarding professionalism, all job descriptions are transparent, detailed, and specific about the level of qualifications. Vacancies are filled through advertisements, and potential candidates are interviewed by a panel that comprises authorities from the MFDP and the CSO.

The CSO provides formal and on-the-job training in the methodology and compilation methods, including participation in seminars, courses, and workshops arranged by the SADC, the regional authority on statistics.

The CSO encourages staff to subscribe to the *African Statistical Journal*, although they are not encouraged to research and write analytical papers for journal publications. Because they are government employees, their contribution could cause a conflict of interest. The CSO considerably encourages staff to submit research papers to the publicly available MFDP newsletter.

In seeking to promote and maintain the CSO's reputation for professionalism, the internal technical working group encourages research and analysis, including the rationale for the choice of methodologies.

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

The CSO's choices of source data for compiling and disseminating the WPI are determined by the availability of basic statistics and data from administrative records according to criteria of statistical reliability, coverage, and consistency. Hence, the choice of source data and statistical techniques primarily is based solely on statistical considerations, and decisions about the timing, media, and other aspects of dissemination are based on statistical considerations. There is no evidence of political or government interference in the choice of data sources and statistical processes used in compiling the WPI.

Section 8 of the *Statistics Act*, requires that official statistics be published. The consumer price index (CPI) and the WPI are simultaneously disseminated to all users. Political approval is not needed to publish statistical information. The CSO maintains a mailing list used for transmitting statistics to users. This mailing list is updated regularly.

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

The government statistician is responsible for responding to any erroneous interpretation and misuse of the WPI. Incidences of inappropriate interpretations and misuse of statistics have been clarified immediately.

1.2 Transparency

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

The *Statistics Act*, in English, is available to the public on the CSO's website, on the IMF's Dissemination Standards Bulletin Board (DSBB), and in publications of the laws of Botswana. All statistical publications identify where to find more information about the CSO and its products. Thus, the contact persons, postal addresses, telephone numbers, facsimile numbers, e-mail addresses, and other relevant information of interest are available.

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

There is no governmental access to the WPI prior to the release.

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

The CSO estimates and releases all price statistics. All the publications display the CSO logo (on press releases, in hard copy publications, and on the website). In all statistical publications, the public is informed that attribution is required. Moreover, in cases of joint publication, the CSO is clearly identified as the data-producing agency.

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

Whenever revisions or changes in methodology are made, reference groups of major stakeholders are constituted for members to be made aware of such changes. Details of changes in methodology are included as appendices to statistical reports. In the case of new surveys, the CSO warns users well in advance that there will be changes.

1.3 Ethical standards

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

The *Statistics Act* provides clear guidelines for correct behavior when the CSO or its staff is confronted with potential conflict-of-interest situations. Thus, all persons employed in the execution of any duty under the *Statistics Act* (or any regulation made thereunder) are required to sign a declaration of secrecy on entering upon duty. This provision of the *Statistics Act* also applies to non-CSO staff, including short- and long-term consultants. Breaches of the oath of secrecy and the use of insider information for personal gain are offenses punishable by payment of a fine, imprisonment, or both.

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 WPI for the domestic economy of Botswana measures the development in wholesale prices for six groups of products, which include food, alcohol and tobacco, building material and consumables, health and personal care, and other goods. It is important to note that this index is not an output price index at the first stage of production. Rather this index is an output index at the first stage of marketing. Exports are not included, although imports are included. Prices are collected only from wholesalers and not from producers.

The price concept for the price survey is the market price or purchaser's price, including value-added tax (VAT) and excluding product subsidies. Therefore, the WPI does not follow the *System of National Accounts 1993 (1993 SNA)* concept of output valuation.

The current weight is derived from the 1993/04 Household Income and Expenditure Survey (HIES), the same survey used to weight the 1996 =100 CPI. Basically, this WPI measures consumer expenditure on wholesale products. This weighting structure is incorrect. If the purpose of the WPI is to measure the changes in price for wholesale products, then this WPI should be weighted according to the total value of receipts obtained by the wholesalers. This value is obtained from the difference between the wholesale price of the product, including transportation, freight and insurance, and the producer cost.

The WPI could be considered an intermediate consumption index and a partial supply price index (SPI) since imports are included. However, this WPI is not intended to function as a total SPI or as an input price index. Only some domestic supply and some imports are included.

If the purpose of the WPI is to measure the changes in price of outputs that comprise the receipts from sales of all output by establishments and the change in the value of inventories of finished goods on hand at the end of the period, then the WPI should be weighted according to the value of production, and in a few instances total sales. This is obviously not what the Botswana WPI intended to measure. Thus, the concepts and definition for both the weight and prices are not consistent with those of a producer price index (PPI), which is considered more analytically meaningful.

Botswana currently is conducting a survey of enterprises. The results of this survey could be used to construct a meaningful Intermediate Consumption Price Index (ICPI). This survey

could collect information on the various margins on basic prices inherent in the prevailing market or purchaser's price, which may vary from industry to industry. According to the IMF's *Producer Price Index Manual 2004 (PPI Manual)*, these types of enterprise surveys can be burdensome and expensive. For that reason, resources can be dedicated instead to the compilation of an SPI. A price index of intermediate consumption by industry can be derived from detailed product components of the SPI.

The *PPI Manual* goes on to say that this SPI index will be more accurate if the variation in the total tax, subsidy, transport, and distribution margin is not variable from industry to industry within a product class. Then, for the total economy, the ICPI is obtained as a weighted average of industries' intermediate input price indices, where the weights are the share of each industry's intermediate consumption in the total intermediate consumption in the economy.

To estimate the SPI, for which an ICPI can be derived, total supply comprises total market-valued output and output for own final use. Total supply at basic price is then the sum of output and imports. Total supply at purchaser's price is then the markup adjustments at the product level for trade and transport margins on domestic production, insurance, and freight on imports, and taxes less subsidies.

The SPI can then be disaggregated or decomposed into price and quantity components: that is, the total SPI at basic price is the weighted mean of the total output price index, and the import price index. This output price index can be considered as a PPI and an implicit deflator for other nonmarket outputs.

According to the *PPI Manual*, SPI at product levels of detail can be used to produce ICPIs that are useful for compiling GDP volume measures from the production approach, and also serve as analytical indicators because of their coverage of all goods and services transactions in the economy relating to production and external trade. The SPI also may be useful as an indicator for economic policy analysis and evaluation and in monetary policy formulation.

Recommendation: The concepts and definition of Botswana's WPI need to be carefully developed to meet the needs of data users. Botswana needs to determine if the WPI is (1) a total SPI, (2) industry ICPI, (3) industrial output price index, and (4) WPI. Since Botswana is currently conducting an enterprise survey, the PSU should consider compiling an SPI index.

2.2 *Scope*

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

The WPI of industrial output for the domestic economy of Botswana measures the development in wholesale prices for six groups of products, which include food, alcohol and tobacco, building material and consumables, health and personal care, and other goods. Mining, some manufacturing, quarrying, and even construction industries are not included. The products covered in the WPI are not representative of the industrial production of Botswana. A meaningful price index, whether it is a PPI or a WPI, cannot be estimated unless the establishments are selected from a representative sample.

Botswana's WPI cannot be separated into a price index for output or price indices for imports and exports since the WPI is not representative of Botswana's economy.

Recommendation: First, Botswana would need to develop a comprehensive Business Register from which a representative sample can be drawn. Industries such as mining (gold and diamond industries), cattle production, etc. should be included in the sample. Second, these industries should be surveyed for their total value of production, which is used as the weights for the index, and basic price and/or volume change from one period to the next. Only then can a meaningful PPI be constructed.

2.3 *Classification/sectorization*

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

The classification system used for the WPI is not consistent with internationally accepted standards, guidelines, or good practices. Botswana's WPI is classified according to the Classification of Individual Consumption by Purpose (COICOP). If the WPI was an intermediate consumption index, then this classification would have been consistent. However, since the purpose of the WPI is to function like an output price index, classification must be done according to economic activity or by product.

Recommendation: The WPI should be classified using internationally accepted standards such as the International Standard Industrial Classification of All Economic Activities (ISIC) and/or the Central Product Classification (CPC).

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The prices reflect those that a consumer would pay on the day of the survey, including wholesale prices with taxes, transportation, freight, and margins.

The survey forms do not indicate price-determining characteristics for specifications and transactions that should be taken into consideration to support pricing of constant quality.

Recommendation: The definition of the WPI should be considered first before deciding on the basis for recording. Basic prices should be collected if the WPI is an output index. Redesign the WPI survey forms to take into consideration product specification.

2.4.2 Recording is done on an accrual basis.

Prices are collected for the first two weeks of the month, usually on a quarterly basis. Hence, price collection is organized quarterly.

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

Grossing/netting procedures are not conducted since no indices are produced that require net weights. Transactions between establishments within the same enterprise are not collected nor transactions between units of the same enterprise. Therefore, there are no intraindustry or interindustry transfers.

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.

Sources for WPI Prices: A Business Register is used to supplement a judgemental list of outlets compiled by the PSU.

Misclassifications tend to be problematic for the Business Register, although nonresponse tends not to be an issue since good relations exist between the price collectors and the outlets.

Nevertheless, the means by which closed businesses are purged from the registry is inefficient and may cause duplication of efforts on the part of the staff in the PSU who have to again verify whether or not the outlet is still in business.

Ad hoc surveys are not conducted to identify new economic activities or products and provide source data for weights and prices.

All types of wholesalers are represented in the price collection exercise—large, medium, and small. The areas covered are as follows:

Geographic Coverage	Number of Wholesale Outlets for the 1997 = 100 Price Index
Towns	
Gaborone	27
Lobatse	10
Jwaneng	4
Francistown	11
Selibe-Phikwe	10
Urban¹ villages	
Maun	10
Mochudi	2
Serowe	5
Kanye	6
Molepolole	5
Palapye	5
Mahalapye	7

¹ Urban villages are defined as those villages that have a population of more than 5,000 in 1991, and in addition fewer than 25 percent of the workforce being engaged in traditional agriculture: *CSO Consumer Price Index Manual, 1998*.

The wholesale outlets sampled are by purpose. Sampling of wholesale outlets is done from the Business Register. Regarding the field work arrangement, price collection in Mahalapye, Shoshong, and areas to the south is covered from the head office in Gaborone, by the PSU staff, while the Francistown Regional Statistics Office covers areas to the north of Mahalapye. Price collectors usually fly to Maun to collect prices.

Approximately 8,100 price quotations are collected from about 570 wholesale outlets for the WPI.

Sources for WPI Weights: Weights used in the 1997 WPI series were derived from the 1993/04 HIES results. The results were based on a sample of 3,608 households. Of the 3,608 households, 1,719 were in towns, 981 were in urban villages, and 908 in rural areas.

The HIES questionnaires were subjected to field testing and observation studies. Pretesting was conducted in areas around Gaborone, which were all from the three strata.

Regular meetings take place within the SADC forum to exchange views and development about CPIs but not WPIs or PPIs between member countries.

Recommendation: Develop an accurate Business Register to avoid problems of out-of-business and misclassification. Conduct ad hoc surveys. Include own-account production of market goods for own final consumption in the WPI.

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

The WPI group items are collected from outlets over a two-week period. Arithmetic average prices are used in the price relatives. The PSU collects prices from the first to the second week of the month.

Source data are not consistent with the definitions, scope, and classification of the WPI estimates.

Recommendation: Source data should be collected from outlets or enterprises instead of households for the weighting of the WPI.

3.1.3 Source data are timely.

The PSU data are not timely to allow for compiling of the WPI. Generally, the WPI is released quarterly with a quarterly referenced period. However, this is usually not always the case. The last WPI was disseminated in May 2006 with August 2005 data.

The weight for the WPI is outdated, with the last HIES survey used for the current weight dating back to 1993/04. A survey of business enterprises is currently under way, but results are not expected until 2007.

Recommendation: The compilation and dissemination of the WPI should not depend on the staff resources available after the compilation of the CPI. An equal amount of staff resources should be available to work on both indices.

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.*

For the 1993/04 HIES, no analysis was done of the sampling errors. Adjustments were made to the HIES for underreporting of specific products such as alcohol and tobacco using imports data.

Sampling errors for price collection are not available since the sampling of outlets is conducted by judgmental selection. Problems of nonresponse are not common for the outlets sampled, owing to the established relationships between the interviewers and the enterprises.

Recommendation: All administrative source data should be routinely assessed and validated.

3.3 *Statistical techniques*

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

A range of price quotes or coding error threshold is employed to minimize processing errors. If any unusual price values appear, the outlet is contacted for price verification. These unusual prices can be identified in the datasets and are not removed or modified.

The prices are first collected and then passed on to the PSU, where the price indices are then tabulated. All datasets are combined, weighted, and aggregated into the national index.

If no price has been collected in any of the wholesale outlets in an area, then the previous month's average price is carried forward for three successive months. If on the fourth and subsequent month, a price quote is still not available, then an average price is imputed on the basis of the average price for that month. Few quality adjustment imputations are conducted. The index is not seasonally adjusted.

The WPI is derived by taking the average of the long-term price relative to the relevant price quotation. Aggregates for the index are obtained using the Laspeyres formula. The weight and price reference period for the index is the same—1997. The prices for 1993/04 weights were updated.

For the WPI, the price ratios are aggregated at the elementary levels for one month's price change of each of the six-item groups in each of the six towns, eleven urban villages, and five rural areas.

Recommendation: Since clothing and furniture are constantly substituted in the index, quality adjustment techniques for these products should be investigated. Overall, quality adjustment techniques need improvements.

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

Once the PSU receives the completed questionnaires, it visually inspects them for consistency checks. The last month's price is compared with the current month's price. Price collectors are asked for an explanation if the price change is over a certain percent.

Additionally, checks are conducted for mistakes such as price quotes written on wrong slots, very high or very low price quotes compared to the previous period price, zero or missing prices, shop deletions, and conversion of prices to the required quantities.

Validations are conducted first by editing the questionnaire, then validating the price reports (after all prices are entered into the computer, a validation report is generated), validating the average prices report, checking the indices, and then generating the final *Wholesale Price Statistics* report, which details sections, groups, and "all-item" indices for each of all the towns, villages, and rural and national areas.

3.4 Assessment and validation of intermediate data and statistical outputs

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

The WPI data are not regularly compared to other price index series such as the CPI since the WPI is compiled and disseminated infrequently. There are no specific price indices for imports and exports.

Recommendation: The WPI should be validated against other price indices.

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

The structure of aggregation is straightforward and breakdowns of the WPI are consistent. The current practice provides logical estimates at the publication level.

3.5 Revision studies

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

The WPI is considered final when released. The WPI basket and weights are updated when there is a new HIES. No revisions are conducted once the index is released, since four validation checks are conducted during the compilation and aggregation of the index. However, studies and analyses of the weight revisions are carried out when there is a new HIES, and are used internally to inform statistical processes.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

Botswana does not meet the periodicity and timeliness recommendations for the General Data Dissemination System (GDDS).

Recommendation: Improve the periodicity of the WPI to one month to meet the GDDS recommendations.

4.1.2 Timeliness follows dissemination standards.

The WPI usually is published three months after the end of the reference quarter, which is not within the monthly recommendations of the GDDS.

Recommendation: Improve the timeliness of the WPI to one or two months to meet the GDDS recommendations.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

The WPI aggregation structure is consistent from the cell level to the item level, the item level to the group level, and the group level indices to higher levels of expenditure classes and the all-item level. Geographical aggregation, as well as import aggregation, is used and is consistent.

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

Consistent time series are available for the WPI from 2001 to 2005. Prior to 2006, a PPI was compiled and disseminated. This PPI is available from September 1997. Since 2001, the compilation of the PPI was halted. For methodological reasons, these two indices cannot be linked.

Recommendation: The two series, from the PPI to the WPI, or from the WPI to the PPI, should be reconstructed to determine a historical series.

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

Since the WPI data are not verified with other data sets such as the CPI, national accounts, and import/export price data, the PSU is not able to determine if the WPI data are consistent with these other datasets.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

The WPI series are final when first released and are not subject to revisions. See 3.5 above.

Whenever weights are revised, users are informed about the process via the Internet, press release, and conferences. The weight revisions are discussed with members of the reference group, consisting of representatives from the private sector, other government agencies, and academia. In the HIES publication, analyses and comparisons between the old and the new HIES are usually stated.

4.3.2 Preliminary and/or revised data are clearly identified.

Since the WPI is not revised, there is no need to identify preliminary data.

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

Since the WPI data are final when first published, there are no revisions.

For the weight revisions, no studies or methodological notes are produced.

Recommendation: Whenever changes are made in the methodology, weights, etc., analyses and notes should be available to the public.

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).*

The CSO publishes charts and tables to facilitate analysis. The WPI data are generally accessible, and the datasets are published with various levels of disaggregation.

Each news release concerning the dissemination of the WPI includes an assessment or analysis of current period developments. Several hard copy and electronic publications disseminate the price indices with time-series data.

5.1.2 *Dissemination media and format are adequate.*

The WPI data are disseminated in ways that facilitate redissemination in the media through official press releases and the Internet. The data are simultaneously disseminated to all interested parties through a monthly press release. Data are also simultaneously disseminated on the CSO's website, <http://www.cso.gov.bw/>.

More comprehensive and/or detailed statistics are also available to the public. Requests for these types of data are usually completed in one day and longer if requests are labor-intensive.

5.1.3 *Statistics are released on a preannounced schedule.*

An advance release calendar is posted on the CSO's website, but no release dates for the upcoming year are indicated.

Recommendation: The CSO should indicate the dates of the data release in an advance release calendar.

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

The WPI is made available to all users at the same time.

5.1.5 *Statistics not routinely disseminated are made available upon request.*

Detailed customized tabulation (detailed breakdowns) of price indices data is available upon request, in addition to the tables routinely disseminated. For specific purposes, customized

tabulation of data that satisfy the CSO's disclosure requirements is also available free of charge.

Data users are aware of the availability of additional statistics but not of the procedures for obtaining them.

Recommendation: The CSO should provide explicit procedures or instructions to data users on how to obtain data.

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 concepts, scope, classification, data sources, and methods of the WPI is not available on the CSO's website or the IMF's DSBB. There is no technical guide on the WPI.

Recommendation: Provide WPI metadata for the DSBB and provide up-to-date and pertinent metadata to the public, and either link the technical guide to the CSO's website or provide methodological notes on the site.

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

There are no brochures, pamphlets, or newsletters about the CPI on how to locate the data available, besides the news releases posted on the CSO's website. Background papers, working documents, etc., are not available. Nevertheless, on November 18, 2006, an "African Statistics Day, National Strategies for the Development of Statistics" is being planned. This program to market statistics is sponsored by the Economic Commission for Africa and the African Center for Statistics. The theme of the program is "Statistics Planning at the Sources of Dynamic Development." For this program, several brochures, pamphlets, and posters are printed.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

All publications give the name, telephone, facsimile, and e-mail of the CPI staff who is available to provide assistance to users.

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

A catalog of publications together with their prices is available on the CSO's website. The CSO's quarterly *Statistical Bulletin* also contains a list of the CSO's publications.

Table 3. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Wholesale Price Index
(Compiling Agency: Central Statistics Office)

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 <i>Statistics Act</i> is being revised, which will give greater responsibility to the government statistician and the CSO in the collection, production, and dissemination of statistics (short term).
0.2 Resources			X			Not enough staff to compile and disseminate PPI.	
0.3 Relevance		X					
0.4 Other quality management			X			No review of work programs.	
1. Assurances of integrity							
1.1 Professionalism		X					
1.2 Transparency		X					Any revisions and change in methodology will be made available in advance to all users (medium term).
1.3 Ethical standards		X					
2. Methodological soundness							
2.1 Concepts and definitions				X		The concepts and definition of Botswana's WPI are not carefully developed to meet the needs of data users.	Resume compilation of a PPI (short term).
2.2 Scope				X		Botswana does not have a comprehensive business registry from which a representative sample can be drawn. Industries such as mining (gold and diamond industries), cattle production, etc., are not included in the sample.	
2.3 Classification/sectorization				X		WPI is not classified using internationally accepted standards such as the <i>ISIC</i> and/or the <i>CPC</i> .	

Table 3. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Wholesale Price Index
(Compiling Agency: Central Statistics Office)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment			Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO		
2.4 Basis for recording			X		The definition of the WPI is not considered first before deciding on the basis for recording.	
3. Accuracy and reliability						
3.1 Source data				X	An accurate business registry to avoid problems of out-of-business and misclassification is not developed. Ad hoc surveys are not conducted. Own-account production of market goods for own final consumption in the WPI is not included. Administrative data are not routinely assessed and validated. Overall quality adjustment techniques is poor. The WPI is not validated against other price indices.	
3.2 Assessment of source data			X			
3.3 Statistical techniques			X			
3.4 Assessment and validation of intermediate data and statistical outputs			X			
3.5 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness				X	The periodicity of the WPI does not meet the GDDS requirements.	
4.2 Consistency			X		There is no intertemporal consistency.	
4.3 Revision policy and practice			X		Whenever there are changes in the methodology, weights, etc., there are no analyses and notes available to the public.	

Table 3. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Wholesale Price Index
(Compiling Agency: Central Statistics Office)

Element	NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO	NO		
5. Accessibility							
5.1 Data accessibility			X			An advance release calendar does not indicate the dates of the data releases. Data users do not have explicit procedures or instructions on how to obtain data.	
5.2 Metadata accessibility				X		WPI metadata for the DSBB, up-to-date and pertinent metadata, and links to the technical guide or methodological notes are not available for the public on the CSO's website.	
5.3 Assistance to users					X		

IV. 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.*

The responsibility for collecting, processing, and reporting fiscal statistics is clearly assigned to the minister of the Ministry of Finance and Development Planning (MFDP) by the *Finance and Audit Act* (1970), Chapter 54:01. In particular, Section 4 of the *Finance and Audit Act* establishes that the minister will supervise the finances of Botswana and ensure that a full account is made to the national assembly. However, with regard to dissemination, it should be noted that the law mandates the minister to make certain budgetary information available to parliament according to a specified timetable, but does not establish an obligation to disseminate statistics to the general public.

Section 34 of the *Finance and Audit Act* establishes that the accountant general must prepare and transmit to the auditor general a series of specified accounts and statements within eight months after the end of the financial year. Section 35 of the *Finance and Audit Act* establishes that the auditor general must submit his report to the minister within four months after his receipt of the accounts and statements, while Section 36 establishes that the minister must submit the same to the national assembly, together with the auditor general's certificate, within 30 days thereafter. Finally, Section 44 of the *Finance and Audit Act* empowers the minister to issue instructions to better carry out his mandate, and to this effect the minister issued the *Financial Instructions and Procedures* (1973).

The *Statistics Act* (1967) sets the rules governing the collection, processing, and dissemination of statistics. Section 3 of the *Statistics Act* establishes that the Central Statistics Office (CSO), a department of the MFDP, is authorized to collect statistics on the "public administrative, financial, industrial, and commercial activities of the government and local authorities, and the activities of institutions established by them."

The Ministry of Local Government (MLG) is responsible in practice for collecting, processing, and disseminating information on the finances of local authorities.

The Division of Budget Administration (DBA) and the Accountant General Department (AGD) of the MFDP are tasked with discharging the responsibility for collecting, processing, and disseminating fiscal statistics. The task of compiling government finance statistics (GFS), i.e., fiscal statistics compiled according to international guidelines, is assigned by the DBA's strategic plan to two of its units: (1) the Cash-Flow Unit (CFU), responsible for

budgetary central government operations; and (2) the Public Debt Service Unit (PDSU), responsible for central government debt. These GFS, detailed in Section 2.2.1, are the main focus of this assessment. Working arrangements within the MFDP are consistent with the assignment of responsibilities.

Recommendation: Assign formally to the MFDP minister the responsibility for disseminating fiscal statistics to the general public.

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

Most of the source data for compiling fiscal statistics are generated within the MFDP, through the Government Accounting and Budgeting System (GABS). Clear procedures are in place to ensure effective and timely flow of source data among the various units of the ministry.

The MFDP is the only data-producing agency for fiscal statistics. It provides the necessary information on public finance to the Bank of Botswana (BoB) and CSO. These two institutions, particularly the BoB, also disseminate fiscal statistics through their publications and websites. In fact, the BoB monthly bulletin is the only source of subannual fiscal statistics. The role of the MFDP is clear, and therefore there is no duplication of efforts or unnecessary respondent burden concerning fiscal statistics.

A high-level working group of the three data-producing agencies meets quarterly on issues of mutual interest. The flow of information at the technical level could be improved, because requests for information from other institutions must be in writing and channeled through senior officials. However, at times, requests for information are handled informally.

Recommendation: Establish a technical working group of the three data-producing agencies (MFDP, BoB, and CSO) to exchange views and information on a monthly basis.

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

The confidentiality of data reported by individual persons and entities is protected by Sections 9 and 12 of the *Statistics Act*, while the *Public Service Charter* sets out the basic principles to guide public servants, including due diligence in the performance of their activities.

Section 9 of the *Statistics Act* also establishes that information should be presented in such manner that no individual particulars are disclosed; Section 12 establishes penalties for the disclosure or use of confidential information. Staff who disclose confidential data are subject to fines and/or imprisonment.

Access to the GABS is restricted to selected users and is password-protected. Access to officers' computers is also password-protected. Offices are locked at the end of the day.

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

The *Finance and Audit Act* empowers the MFDP minister to collect all relevant information to discharge his responsibility of accounting for the finances of Botswana to the national assembly. The *Finance and Audit Act* also establishes the obligation to comply with the request for information by the proper officials.

The *Financial Instructions and Procedures*, issued pursuant to Section 44 of the *Finance and Audit Act*, provides detailed guidance on the manner in which public funds are used and controlled.

0.2 Resources

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

Overall, the number of staff in the CFU and PDSU seems insufficient to adequately perform the tasks associated with compiling and disseminating GFS. Only two and three officers, respectively, are assigned to perform these and other tasks, and their training on international best practice methodologies is limited.

Furthermore, the number of staff is insufficient to perform the tasks associated with disseminating more complete and detailed annual and subannual GFS or adopting the new international guidelines for the compilation of GFS. In addition, high levels of staff turnover have accentuated the difficulties of compiling GFS. Salary levels are competitive with other areas of public administration but are lower than in financial institutions and parastatals.

Overall, sufficient resources are allocated to computing technology, both for hardware and software. Each staff member has a computer assigned for his personal use, and additional computers are available for other uses (e.g., maintaining databases). Technical support is available and backup systems are in place to protect data.

The introduction of the GABS in September 2004 represents a major step forward in the availability of comprehensive and timely information for the compilation of fiscal statistics. This area has significantly improved compared to the situation at the time of the 2001 assessment. The GABS has already been installed in 19 of 21 ministries (installation in the other two will be completed by December 2006) and operates nationwide. Only

the 19 missions abroad are currently outside the GABS. The new system already generates a vast amount of data on a timely basis, but development of output tables is still ongoing. Thus, the system has not yet reached its full potential.

The computerization program for local authorities is significantly behind schedule and faces serious problems. The MLG has requested assistance on the matter from the MFDP.

The MFDP office buildings provide comfortable working facilities. Office furniture and equipment are adequate to perform the required tasks.

The funding for the identified needs of the units responsible for compiling and disseminating GFS is included in the overall budget of the MFDP and is considered secure. However, additional funding would be needed to provide the necessary increase in human resources.

Recommendations:

1. *Allocate more human resources to the compilation and dissemination of GFS, and emphasize training in international methodologies. Adopt measures to reduce staff turnover.*
2. *Give priority to developing output tables from the GABS.*
3. *Evaluate the status of the computerization program for local authorities and decide promptly on how best to proceed.*

0.2.2 Measures to ensure efficient use of resources are implemented.

Annual reviews of staff performance are conducted. The strategic plan for the MFDP incorporates the use of a performance management system to assess performance against key results, using performance indicators.

The resources used to compile fiscal statistics and GFS are not measured periodically. Detailed and automated budgeting procedures are used to allocate resources.

0.3 Relevance

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

Current fiscal statistics are mainly geared toward compliance with existing legislation and regulations. The needs of MFDP senior officials, as well as the needs of the other data-producing agencies and government agencies, are reasonably met. The needs of the general

public do not receive particular attention. No systematic actions to identify future data requirements by the general public are undertaken.

Recommendation: Give increased attention to meeting the needs of data users outside the government.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

Management recognizes the importance of quality, as reflected by the introduction of a performance management system and the GABS. Management strongly supports higher education. Improved recognition of trade-offs among data quality dimensions, particularly between accuracy and timeliness, is needed. Good-quality fiscal statistics are compiled, but they are available with long lags.

0.4.2 Processes are in place to monitor the quality of the statistical program.

The use of the GABS to generate reports directly from accounting data has improved significantly the reliability of fiscal statistics. Compliance with the existing financial instructions and procedures is monitored. All budgetary central government units follow uniform accounting rules and data-entry guidelines. Annual fiscal statistics are audited before publication. However, processes to monitor and improve the quality of GFS are not fully in place.

0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.

The MFDP should incorporate international best practice, such as the *Government Finance Statistics Manual 2001 (GFSM 2001)*, into the statistical program. Participation in the General Data Dissemination System (GDDS) represents a significant step in this direction, but a more proactive approach to introducing improvements in the quality of data is required (see recommendations in Sections 2–5 below).

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

The *Finance and Audit Act* and the *Statistics Act* both support the compilation of fiscal statistics on an impartial basis, although no explicit section supports professional

independence. However, a culture of professionalism is adhered to, and no outside interference with statistical results is permitted. In addition, the basic principles of the *Public Service Charter* also support professional independence.

Recruitment is conducted through a competitive process based on the qualifications for the position being filled. On-the-job training is provided to new hires. Promotion is based partly on performance and partly on seniority. Participation in relevant international seminars and courses is supported. However, processes and activities in the workplace that promote a culture of professionalism are limited, and no research nor analysis is encouraged. Nevertheless, the MFDP does support higher education for the staff.

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 and statistical techniques is based exclusively on data and processing requirements. There is no evidence of political influence in the selection of data sources. However, high-level political support would be required to undertake the activities needed to meet the requirements of the Special Data Dissemination Standard (SDDS) or adopt the new international guidelines for the compilation of GFS.

Decisions to disseminate data are based mainly on legal obligation (*Finance and Audit Act*) and, to a lesser degree, on statistical considerations.

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

The MFDP staff can provide expert advice on technical aspects of fiscal statistics. Staff also monitors media coverage of its data and alerts the Public Relations Office in cases of misinterpretation or misuse. This office has the responsibility to issue any necessary clarifications.

The MFDP minister addresses questions at the time of his annual budget speech.

1.2 Transparency

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

The legislation referred to in Section 0.1.1 above is publicly available. Statistical publications do not identify where users may locate more information about the data-producing agency and its products. The availability of subannual GFS is not advertised and its use is mostly internal.

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

The fiscal statistics compiled by the MFDP are available to senior officers and other units of the corresponding ministry for review and internal information prior to their general dissemination. Furthermore, both the BoB and the CSO have access to the data before its publication. This access prior to dissemination is not made public.

Recommendation: The MFDP should identify in the corresponding publications, and on the GDDS metadata posted on the IMF's Dissemination Standards Bulletin Board (DSBB), the internal government's access to statistics prior to their release to the public.

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

The identity of the agency responsible for compiling the data released to the public is clearly identified, and the agency requests attribution when its statistics are used or reproduced.

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

Major changes in methodology and source data are usually contained in legislation or are announced when the changes are introduced.

1.3 Ethical standards

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

Section 12 of the *Statistics Act* establishes sanctions for public servants for improper behavior in the discharge of their functions, and Section 16 establishes that any person employed in the execution of the *Statistics Act* must make and subscribe to an oath of affirmation. The *Public Service Charter* sets out the basic principles of public service by

which public servants are guided, both in their relations with each other and in their dealings with the public.

The contract for public servants, which all new hires must sign, refers to the observance of the *Public Service Charter*. Staff are not reminded periodically of the standards.

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 to compile GFS generally follow the guidelines of *A Manual on Government Finance Statistics 1986 (GFSM 1986)* for the budgetary central government but not for local governments. However, the concepts and definitions used to compile fiscal statistics for local governments can be reclassified to conform with the guidelines of the *GFSM 1986*.

No decision has been taken by the authorities on adopting a “migration path” from the *GFSM 1986* methodology to the *GFSM 2001* methodology.

Recommendation: When the GFSM 2001 methodology is adopted, the MFDP should ensure that the codes for the new methodology are embedded in the GABS so as to generate GFS directly and automatically from accounting data.

2.2 Scope

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

To facilitate understanding of the coverage of fiscal statistics, the institutional structure of Botswana’s general government sector is set out and explained below.

A. Central Government (1+2+3)

1. Budgetary central government

Parliament, state president, ministries (13), Administration of Justice, Attorney General’s Chambers, auditor general, Independent Electoral Commission, Office of the Ombudsman, and Industrial Court.

2. Extrabudgetary funds

A number of entities currently considered to be parastatal (e.g., University of Botswana, Institute of Development Management).

3. Social Security Funds

Not applicable.

B. Local Governments

- (1) District Councils (9)
- (2) Land Boards (12)
- (3) City Councils (2)
- (4) Town Councils (4)

C. General Government Sector (A+B)

Botswana has two levels of government: central government and local governments. The central government is composed of the budgetary central government and extrabudgetary units. The extrabudgetary units most likely include a number of entities currently considered parastatals, which under examination would probably be reclassified as central government entities. The local governments include district councils, land boards, city councils, and town councils. As detailed below, Botswana compiles and disseminates subannual fiscal statistics only for budgetary central government, while annual statistics are compiled and disseminated for budgetary central government and for local governments. No subannual or annual fiscal statistics are compiled for extrabudgetary units and, thereby, consolidated central government and general government. Thus, fiscal statistics do not cover the whole central government and general government institutional sector.

MFDP

The MFDP publishes two annual reports—the *Financial Statements, Tables, and Estimates of the Consolidated and Development Fund Revenues* and the *Estimates of Expenditure from the Consolidated and Development Funds*—both issued in February of each year, together with the budget speech for the upcoming financial year (the financial year begins April 1). The first report includes, among other tables, a consolidated cash-flow presentation of the budget, with a breakdown for revenue, expenditure, and financing; a functional classification of expenditure and net lending table for budgetary central government; and a table on medium- and long-term external debt by type of holder for central government. The three tables present a six-year series of final data, one year of revised estimates, and one year of budget estimates. The second report provides detailed estimates of expenditure by spending

unit for the coming financial year, partial information on the expenditure of these units for the current year, and final information for the previous year.

The MFDP also publishes the *Annual Statement of Accounts*—a report prepared by the accountant general and released 12 months after the end of the reference period. The report consists of 22 statements specified in the Second Schedule of the *Finance and Audit Act*, which provides a vast amount of information on the finances of the government. Statement 11 provides details on the external debt by loan and lender and includes a summary table of outstanding public debt by currency. Statement 17 provides details on the loans guaranteed by the government to parastatals. In addition to the statements, the report includes the same two tables for budgetary central government mentioned in the paragraph above, although only with information for the reference year and the previous year.

The MFDP compiles through the CFU the *Cash-Flow Monthly Series*, consisting of a single summary table, with a detailed economic classification of revenue and expenditure, and financing for budgetary central government. The table presents monthly data for the current financial year. Although not published, this document is distributed to the BoB and CSO. The BoB includes the information in its monthly bulletin, and the CSO uses the information for compiling national accounts. The CFU also generates reports on debt from the Commonwealth Secretariat - Debt Recording and Management System (CS-DRMS), which it maintains using PDSU information. These reports are generated irregularly and are not published.

The annual reports published by the MFDP are only available in hard copy, since only limited and generally outdated fiscal statistics are available on the ministry's website (<http://www.finance.gov.bw/>). These reports, plus the *Cash-Flow Monthly Series*, are provided to the IMF's African Department (AFR) at the time of the Article IV consultation; the specific tables mentioned above contain the data subject to the current assessment.

BoB

The BoB publishes in its *Annual Report* a section on statistics, which includes a few tables with annual data on public finance: a budget summary table, a detailed revenue table, and a functional classification of expenditure table for budgetary central government; as well as a table on medium- and long-term external debt by type of holder for central government. All these tables present a 10-year series of final data, one year of revised estimates, and one year of budget estimates. The report issued in May 2006 contains final data for public finance through 2004/05.

The BoB also publishes the *Botswana Financial Statistics (BFS)*—a monthly bulletin which includes the same tables on public finance as those that appear in its *Annual Report*. All these tables present an eight-year series of final annual data and a three-year series of

cumulative quarterly final data, without a monthly breakdown. The bulletin for July 2006 contains final data for public finance through December 2005 for the budget summary table and the detailed revenue table, while the other two tables are presented with significantly longer lags. The bulletin for August 2006 contains final data for public finance through June 2006 (although not for March 2006) for the budget summary table and the detailed revenue table, while the other two tables contain data through March 2005. No data are available for March 2006 because the accounts for the end of the financial year were not released by the accountant general until early November. The monthly bulletins are available on the BoB's website (<http://www.bob.bw/>) with a one-month lag and in hard copy with a two-month lag.

MLG

The MLG publishes three annual reports: *City and Town Councils Recurrent Budget*, *Landboards Recurrent Budget*, and *District Councils Recurrent Budget*. The reports include two summary nonconsolidated tables for income and expenditure, as well as detailed financial statements for each local government. In principle, these reports present data for three years—one final and two estimates. However, the latest available complete set of final data for local governments is for 2002–03. Some of the accounts for 2003–04 are still being audited, and not all local governments have produced their accounts for 2004–05. Thus, final data for local governments are currently only available with at least a three-year lag. It should be noted that the revenues and expenses of local governments are estimated to account for less than 10 percent of total revenues and total expenses of general government.

Summary

Briefly stated, the institutional scope of the monthly and annual fiscal statistics for budgetary central government and annual fiscal statistics for local governments generally follows international guidelines. However, no fiscal statistics are compiled for extrabudgetary institutions, consolidated central government, and consolidated general government.

In terms of transaction coverage, data are generally available to the standard specified in the following *GFSM 1986* tables: summary table of major components, government revenue and grants, classification of the functions of government, economic classification of government expenditure and lending minus repayments, financing by type of debt instrument, and outstanding debt by type of debt holder. Data are available but not published for financing by type of debt holder and outstanding debt by type of debt instrument. Data are provided on general government gross debt classified by residency of the counterparty to the liabilities.

Revised estimates on annual GFS data for budgetary central government are produced once a year in February and published in the reports released together with the budget speech. The revised estimates replace the budget estimates from the previous year and are in turn replaced

with final data when they become available. These revised estimates are based on eight to nine months of final data and three months of estimates for revenue and the original budget plus supplementary appropriations for expenditure, while the financing data remain unchanged, except for the cash balances used as a balancing item. Except for the revised estimates for the most recent year, all data are complete and final when published—a practice that results in long lags for the dissemination of budgetary central government and local governments data.

Recommendations:

1. *To enhance the consistency of macroeconomic datasets, the technical working group of the MFDP, BoB, and CSO, proposed in Section 0.1.2, should prepare a comprehensive list of institutions that comprise the central government and its subsectors.*
2. *The MFDP should compile and disseminate, at least on an annual basis, GFS for extrabudgetary institutions, consolidated central government, and consolidated general government.*
3. *The MFDP should use preliminary data, available prior to the release of the accounts for the last month of the financial year, to publish the monthly summary cash flow for that month with no more than a two- to three-month lag.*

2.3 Classification/sectorization

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

Although the classifications used for subannual and annual fiscal statistics on the operations of budgetary central government follow broadly the concepts and definitions of the *GFSM 1986*, they have a number of significant differences. While revenue and expenditure by function are classified in general conformity to international guidelines, the economic classification of expenditure, financing, and debt have some differences.

For the economic classification of expenditure, the two main differences with *GFSM 1986* guidelines are (1) the use of the single item “other charges” to cover other purchases of goods and services, subsidies, and current transfers and (2) the presentation of less detail for all items than recommended by the *GFSM 1986*. The classification of financing resembles the classification by type of debt instrument, with some presentation differences. For instance, disbursements of domestic and external loans are presented separately, but the amortization of both types of loans is presented jointly, without a breakdown between the two. No classification of financing by type of debt holder is provided. The classification of debt

resembles the classification by type of debt holder but excludes domestic financing. No classification of debt by type of debt instrument is provided.

The classifications for annual fiscal statistics on the operations of local governments follow national concepts and definitions.

Fiscal statistics are provided separately for budgetary central government and local governments. As indicated in Section 2.2.1, no fiscal statistics are compiled for extrabudgetary institutions, consolidated central government, and consolidated general government.

Recommendation: Follow the guidelines of the GFSM 1986 in classifying subannual and annual fiscal statistics on the operations of budgetary central government and local governments.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

Flows are valued on the basis of the amount of payments in cash. Gross debt is valued at face value. Flows denominated in foreign currency are converted to national currency using the midpoint between the buying and selling market rates on the date the transaction took place. The outstanding external debt is converted to national currency using the midpoint between the buying and selling market rates at the end of the period.

2.4.2 Recording is done on an accrual basis.

Transactions are recorded on a cash basis, as close as possible to the time of payment, consistent with the guidelines of the *GFSM 1986*.

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

Transactions are generally recorded on a gross basis, including financing transactions and corrective transactions, which the *GFSM 1986* recommends recording on a net basis.

Recommendation: Record on a net basis financing and corrective 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 are complete to allow the compilation of GFS for budgetary central government on a monthly, quarterly, and annual basis. The GABS provides accounting records for the full range of transactions and financial stocks. Furthermore, the system allows customized reports to be generated automatically. For example, the monthly summary cash flow is generated automatically. Data sources are also complete to allow the compilation of GFS for local governments on an annual basis. There are no data sources for extrabudgetary units; therefore, it is not possible to compile GFS for consolidated central government and consolidated general government.

There is no comprehensive register of individual public sector units.

Recommendation: Data sources for extrabudgetary units should be identified (e.g., financial statements) to enable compilation of GFS for this subsector and for consolidated central government and consolidated general government.

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

Data sources for budgetary central government are consistent with guidelines on the definitions, scope, sectorization, classification, time of recording, and valuation of flows and stocks. These sources also permit consolidation with other subsectors. The chart of accounts for budgetary central government provides sufficient detail to align them with GFS classifications. Data sources for local governments are sufficiently consistent with international guidelines to allow sound GFS to be compiled. Additional information is likely needed to permit consolidation with other subsectors. The chart of accounts for local governments allows reclassification to GFS categories.

3.1.3 *Source data are timely.*

Data sources for budgetary central government are timely. Most of the information is entered directly into GABS online and is available the same day. Once the accountant general verifies the Statement of Assets and Liabilities of the government, the accounts in GABS are released for use by other units, usually by the 21st of the following month. The exception is March, because the accounts for the end of the financial year are only released after seven to eight months. Furthermore, the audited data used for compiling annual GFS are only

available with a 12-month lag. Data sources for local governments are not timely. Annual information is only available with at least a three-year lag.

Recommendation: The MFDP should make efforts to obtain timely data sources for local governments.

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.

The GABS uses Oracle financial software that incorporates extensive built-in controls. Furthermore, validation procedures are in place to ensure data accuracy. At present, most of the data are entered directly into the system, and reports are generated automatically. Reconciliation procedures are also in place to further ensure data accuracy. In addition, the auditor general audits the annual accounts before they are released. The data from local governments are less reliable but also are audited by the auditor general prior to release.

3.3 Statistical techniques

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

A uniform chart of accounts is used to enter information into GABS. Supervisors ensure that the proper codes are used to record transactions and stocks. The revised estimate for the latest year is based on accepted statistical practices, including extrapolation and trends from previous years. The revised estimate is replaced by final data once it becomes available. There is not a good balance between accuracy and timeliness, the former being emphasized over the latter. The procedures for entering and processing data through GABS are well documented.

The March figures for the various categories of fiscal statistics are disproportionately large because the adjustments made to the annual data at the close of the financial year are all assigned in the accounting records to that month, and not to the month in which the transaction took place.

Recommendation: Assign the adjustments made at the close of the financial year to the month in which the transaction occurred when compiling GFS.

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

A mapping table has been developed for generating the monthly summary cash flow directly from accounting records.

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 generally not available for fiscal statistics. Aggregates are cross-checked against the Statement of Assets and Liabilities and against data for recurrent revenue, recurrent expenditure, and development expenditure data. The sum of components is verified against the total.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Large fluctuations or discrepancies are investigated.

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

Statistical outputs are checked horizontally and vertically to reduce discrepancies, and values outside expected ranges are investigated. External debt data are compared with creditor information in a nonroutine manner. Fiscal data discrepancies among national compilers on particular items (e.g., domestic debt, foreign debt, foreign grants, domestic financing) are not regularly reconciled.

3.5 Revision studies

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

There are virtually no revisions, except for the revised estimates for the latest year for budgetary central government. Revision studies are not routinely conducted.

4. Serviceability

4.1 *Periodicity and timeliness*

4.1.1 *Periodicity follows dissemination standards.*

Statistics for central government budgetary operations are compiled monthly and disseminated quarterly, while statistics for central government debt are compiled and disseminated annually. Thus, the periodicity of fiscal statistics meets the GDDS recommendation. It should be noted that because the statistics for central government budgetary operations are disseminated on a cumulative basis, data for individual quarters require subtracting data from consecutive quarters.

4.1.2 *Timeliness follows dissemination standards.*

Quarterly statistics for central government budgetary operations are disseminated with a four- to nine-month lag, while annual statistics for central government debt are disseminated with a 12-month lag. Thus, the timeliness of fiscal statistics does not meet the GDDS recommendation, which requires dissemination of central government budgetary operations within one quarter, and dissemination of central government debt within two quarters. It should be noted that information is available to compile and disseminate fiscal statistics within a timeframe that would easily meet the GDDS recommendation.

In this connection, the BoB states that it does not update regularly the public finance data on its *BFS* because it does not receive regular submissions.

Recommendations:

1. *The mission recommends that the monthly summary cash-flow table be posted on the MFDP's website immediately after it becomes available. It also recommends that a quarterly central government debt table be compiled and posted on the MFDP's website. In this manner, Botswana would easily meet the GDDS timeliness recommendation.*
2. *The public finance data published in the BoB's BFS should be updated regularly.*

4.2 *Consistency*

4.2.1 *Statistics are consistent within the dataset.*

The concepts, definitions, and classifications for producing subannual and annual fiscal statistics by the MFDP are the same. For both these sets of statistics, the deficit/surplus does

not equal the financing, and the discrepancy is incorporated into other financing; major aggregates equal the sum of components; functional and economic expenditure are equal; domestic and foreign financing are consistent with changes in debt; transfers paid cannot be compared with transfers received; and interest in the functional and economic expenditure is equal. In addition, the subannual and annual summary table is consistent with the Statement of Assets and Liabilities.

Recommendation: The discrepancy between the deficit/surplus and financing should be recorded in a separate item and not incorporated into another item.

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

The *Financial Statements, Tables, and Estimates of the Consolidated and Development Fund Revenues* and the *Estimates of Expenditure from the Consolidated and Development Funds* present tables with a consistent six-year series of final data, one year of revised estimates, and one year of budget estimates. Source data and methodology have not changed significantly in recent years. Commentaries are not included in the publications, but the budget speech discusses highlights of recent developments.

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

The MFDP is the only data-producing agency that compiles fiscal statistics. As such, all fiscal statistics disseminated by data-producing agencies are fully consistent. MFDP data are used for compiling national accounts and balance of payments statistics, thereby ensuring consistency in principle. Nevertheless, published data should be reconciled on a regular basis. There are differences with the financing data from the monetary accounts, which have not been reconciled.

Cross-checks to ensure consistency of the GFS with other data generated in the MFDP are partially carried out, but no cross-checks are carried out with relevant data generated by other data-producing agencies.

Recommendation: The technical working group of the MFDP, BoB, and CSO, proposed in Section 0.1.2, should (1) reconcile on a regular basis the data each agency generates or publishes that conceptually should be the same and (2) investigate any discrepancies.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

As indicated in Section 2.2.1 only a single revision of annual data is made for budgetary central government at the time of the budget speech in February. It involves replacing an estimate by a combination of final data and an estimate for the most recent year. This cycle is regular and is known by the public. There is no proper documentation of revisions. The rest of the subannual and annual data are final when published.

4.3.2 Preliminary and/or revised data are clearly identified.

Revised data are clearly identified in all publications of the MFDP and BoB. Users are not specifically informed whenever data are revised; a notation is made just in the corresponding tables.

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

No revision studies are published.

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).

The GFS disseminated in the MFDP publications (*Financial Statements, Tables, and Estimates of the Consolidated and Development Fund Revenues, Estimates of Expenditure from the Consolidated and Development Funds, and Annual Statement of Accounts*), BoB publications (*Annual Report and BFS*), and MLG publications (*City and Town Councils Recurrent Budget, Landboards Recurrent Budget, and District Councils Recurrent Budget*) are presented in a clear manner. The use of charts in all these publications would facilitate analysis.

As indicated in Sections 2.2.1 and 2.3.1, the scope and classification of GFS for budgetary central government broadly follow the standard components of *GFSM 1986*, with some significant exceptions, while the classification of GFS for local governments does not follow the *GFSM 1986*. For both cases, the level of detail provided is less than recommended by international guidelines. Furthermore, as also stated above, no GFS are compiled for extrabudgetary institutions, consolidated central government, and consolidated general

government. Deviations from international standards are not identified in the publications. Time series are provided in some publications. Also, as indicated in Section 4.1.1, statistics for central government budgetary operations are disseminated on a cumulative basis.

Commentaries on current developments are limited to the budget speech and the BoB's *Annual Report*. The CFU prepares a quarterly report based on the figures from the monthly summary cash flow, but this is an internal document only.

Recommendations:

1. *Charts and commentaries should be included in the publications to facilitate understanding of fiscal statistics.*
2. *Disseminate statistics for central government budgetary operations on a discrete (noncumulative) basis.*

5.1.2 Dissemination media and format are adequate.

The MFDP and MLG publications are only available in hard copy, while the BoB publications are also available on the bank's website. The MFDP and MLG publications include a large amount of fiscal statistics other than GFS, but only in hard copy. No information releases or other material are provided to facilitate dissemination of fiscal statistics in the media.

It should be noted that the Intranet website for the MFDP GABS project provides access by public servants to a large number of reports and data generated by the system for individual ministries, although aggregate data are only available to selected MFDP users.

Recommendation: MFDP's publications, or at least selected tables from the publications, should be posted on its website. An MFDP working group should be formed to assess the possibility of preparing selected reports on GFS and other fiscal statistics from the GABS, and disseminating them on the MFDP's website. This working group should take into account the needs of all users, including the general public.

5.1.3 Statistics are released on a preannounced schedule.

The MFDP's *Annual Statement of Accounts* is released according to the stipulations of the *Finance and Audit Act*, which prescribe a timetable but not a specific date. The MFDP's *Financial Statements, Tables, and Estimates of the Consolidated and Development Fund Revenues*, and *Estimates of Expenditure from the Consolidated and Development Funds* are released in February at the time of the minister's budget speech. Thus, the MFDP publications are released according to a regular, though not preannounced, schedule.

The BoB's *Annual Report* is released in May according to the stipulations of the *Bank of Botswana Act* (the *BoB Act*), although not on a specific date. The BoB's *BFS* is available on the BoB's website with a one-month lag and in hard copy with a two-month lag after the end of the reference period, but again not on a specific date.

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

The publications are made available to all users simultaneously and without preferential treatment of selected users. The public is usually not informed of the statistics being released.

5.1.5 Statistics not routinely disseminated are made available upon request.

Statistics not routinely disseminated are sometimes made available. Customized tabulations are not usually provided. The availability of additional statistics and the procedures for obtaining them are not made known.

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 sources and methods document for GFS are published domestically. The only available information appears in the GDDS metadata on the IMF's DSBB, to which the MFDP has a link on its website. However, the link is not readily visible. The GDDS metadata for the fiscal sector were last updated on November 2003 and remain essentially accurate. The name of the contact person for central government debt needs to be updated.

Recommendations:

1. *The link to the IMF's DSBB should be placed on the MFDP's website home page. The name of the contact person for central government debt should be updated.*
2. *A hard copy of the GDDS metadata or other similar metadata should be made available to users upon request.*

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

The only information available on the sources and methods used to compile GFS, as indicated above, is the GDDS metadata on the IMF's DSBB.

5.3 *Assistance to users*

5.3.1 *Contact points for each subject field are publicized.*

No contact person for GFS is identified in MFDP publications. However, contact persons and contact details for each subject field are publicized in the GDDS metadata on the IMF's DSBB. In general, limited assistance is provided to general public users of GFS.

Recommendation: Contact persons and contact details should be included in MFDP publications. The technical working group mentioned in Section 5.1.2 should assess how best to improve assistance to general public users.

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

The MFDP publications are available at the Government Printer, and the cost is indicated on the publication. The BoB publications are available free in hard copy and on the bank's website.

Table 4. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics
(*Compiling Agency: Ministry of Finance and Development*)

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 responsibility for disseminating fiscal statistics to the general public is not assigned. The flow of information among data-producing agencies at the technical level needs to be improved.	The authorities have plans to interphase CS-DRMS with GABS to automate the updating of debt-service payments.
0.2 Resources			X			Insufficient staff to adequately perform tasks, and the staff are generally not trained in GFS methodology.	
0.3 Relevance			X			Insufficient attention to the statistical needs of users outside government.	
0.4 Other quality management			X			Trade-offs between accuracy and timeliness are not recognized. No cross-checks of relevant data with other data-producing agencies. Insufficient recognition of the need to adopt international best practices to improve data quality.	
1. Assurances of integrity							
1.1 Professionalism			X			Statistical publications do not identify where more information about the data-producing agency and its products can be found. Internal government access to statistics prior to their release is not made public. No advance notice of major changes is given to the public.	
1.2 Transparency							
1.3 Ethical standards			X				

Table 4. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics
(*Compiling Agency: Ministry of Finance and Development*)

Element		NA	Assessment				Comments on Assessment	Plans for Improvement and Target Dates
			O	LO	LNO	NO		
2. Methodological soundness								
2.1	Concepts and definitions			X			Fiscal statistics for local governments are not compiled according to GFS methodology. There is no migration path to the <i>GFSM 2001</i> methodology.	The authorities intend to adopt the <i>GFSM 2001</i> methodology.
2.2	Scope			X			No fiscal statistics are compiled for extrabudgetary units, consolidated central government, and consolidated general government. No preliminary annual data are published.	There are plans to have GFS for general government after the computerization of local governments.
2.3	Classification/sectorization			X			Classification of revenue, expenditure, and financing partially follow international guidelines for budgetary central government, and do not follow them for local government.	
2.4	Basis for recording			X			Financing and corrective transactions are not presented on a net basis.	The authorities intend to move toward a modified system of accrual accounting by August 2008.
3. Accuracy and reliability								
3.1	Source data			X			There are no source data for extrabudgetary units. There is no comprehensive register of individual public sector units. Source data for local governments are only available with a long lag.	
3.2	Assessment of source data			X			Adjustments to annual data are all assigned to March, and not to the month the transaction took place.	
3.3	Statistical techniques		X				Potential and final data discrepancies among national compilers are not regularly reconciled.	
3.4	Assessment and validation of intermediate data and statistical outputs			X				

Table 4. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics
(*Compiling Agency: Ministry of Finance and Development*)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment			Comments on Assessment	Plans for Improvement and Target Dates
		O	LO	LNO		
3.5 Revision studies				X	Only the data for a single year are revised. All other subannual and annual data are final when first published. No revision studies are routinely conducted.	
4. Serviceability						
4.1 Periodicity and timeliness			X		The timeliness for central government budgetary operations and central government debt does not meet the GDDS standard.	
4.2 Consistency			X		There are differences with the financing data from monetary accounts.	
4.3 Revision policy and practice			X		No revision studies are conducted and therefore available for publication.	
5. Accessibility						
5.1 Data accessibility			X		The use of charts and commentaries on recent developments would facilitate comprehension. The MFDP and MLG publications are only available in hard copy. Fiscal statistics are not released according to a preannounced schedule, although they tend to follow a regular cycle. Fiscal statistics not routinely disseminated are sometimes made available. Availability of additional statistics not made known.	The authorities intend to disseminate fiscal statistics on the MFDP's website.
5.2 Metadata accessibility			X		The only access to documentation on sources and methods is through a link to the GDDS metadata on the IMF's DSBB. Metadata are not presented in different ways to meet user needs.	The authorities intend to publish the methodology and explanatory notes for compilation of GFS on the MFDP's website.
5.3 Assistance to users			X		Limited assistance is provided to general public users.	

V. 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 Bank of Botswana (BoB) compiles and disseminates monetary statistics as part of its central bank responsibilities regulated under the *Bank of Botswana Act, 1996* (the *BoB Act*). The compilation and dissemination of monetary statistics is not explicitly incorporated in the *BoB Act* but can be implicitly assumed as an extension of the BoB's principal objectives, namely with regard to the formulation and implementation of monetary policy (Section 4) and its role as advisor to the government (Section 43). The *Collective Investment Undertakings Act, 1999* (the *CIU Act*) designates the BoB as the regulatory authority to license, supervise, and regulate collective investment undertakings (CIUs) and confers to the BoB all the powers necessary for this purpose (Section 3). The BoB is the sole agency in Botswana that produces and disseminates monetary statistics. The monetary statistics are disseminated as a service to the public.

The legislation to establish a regulatory agency for nonbank institutions already has been submitted to parliament. The proposed legislation mandates the regulatory agency to request at any time nonbanking financial institutions to report the information deemed relevant for the performance of its functions. The legislation also provides for the BoB governor to be one of the board members of the regulatory agency, which, among other things, will facilitate the setting up of reporting arrangements that would allow the BoB to compile monetary statistics for the financial corporations sector.

The BoB Act (Section 59) empowers the BoB to request information as it may require for the discharge of its responsibilities from any person or entity and stipulates a penalty for noncompliance and for reporting false or misleading information. *The Banking Act, 1995* (the *Banking Act*) stipulates that each bank shall submit to the BoB a statement of its assets and liabilities and imposes a fine in case of noncompliance (Section 20). According to the *Banking Act*, the BoB can publish in whole or in part any information received, as long as the confidentiality of the reporter is preserved or his prior consent has been obtained (Section 48). The *CIU Act* stipulates that all CIUs shall submit half-yearly and audited accounts to the regulatory authority.

Although the law does not explicitly assign the responsibility for the compilation and dissemination of monetary statistics, it was de facto assigned to the BOB. This longstanding arrangement, not challenged by other institutions, has been effective to compile monetary

statistics covering the BoB and the other depository corporations (ODCs) in Botswana (commercial banks, merchant banks, building societies, and savings banks).

The BoB's Research Department (RD) is in charge of compiling and disseminating monetary statistics. The RD is composed of several divisions, each reporting to a deputy director. The Statistics and Information Service Unit (SISU), responsible for compiling the statistics used internally by the BOB and disseminated to the public, reports to one deputy director, while the main data users, including the modeling and forecasting unit in the RD, report to the other. Monetary statistics are compiled by the Monetary Statistics Section (MSS).

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

In 2002 the Statistics Producer Committee—chaired by the BoB's deputy governor, the secretary of budget administration, or the director of the CSO on a rotating basis—was established to facilitate data sharing and cooperation between the BoB and other official agencies. This committee meets about three times a year to promote the proper understanding of data requirements, discuss procedures for the effective flow of source data, and avoid any duplication of efforts. In addition, the RD's deputy director in charge of statistics serves as the liaison on statistical emerging issues between the BoB, the MFDP, and the CSO.

Because the MSS does not have electronic access to the information produced by the Accounting Department (AD), it receives a hard copy of the monthly balance sheets and supporting returns from the AD. Internal procedures require that the monthly balance sheet be certified, signed off by the AD director, and approved by the governor before being submitted to the RD. In practice, these procedures result in significant delays in the data transmission to the RD. Although the ODCs still submit hard copies of their monthly balance sheets and supporting schedules, the Banking Supervision Department (BSD) is currently upgrading its systems for the ODCs to start reporting their returns electronically.

Recommendation: Ensure a timelier flow of monthly data to compile monetary statistics by providing RD access to the BoB's trial balance sheet data for compiling preliminary monetary statistics.

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

Section 19 of the *BoB Act* states that no official or employee of the bank shall disclose any information relating to the affairs of the BoB, any other bank, financial institution, business, or person, which has been acquired in the performance of his duties or the exercise of his functions. Data reporters are assured that the information provided by them will be handled confidentially, and there are no known cases where the confidentiality has been violated.

Section 48 of the *Banking Act* prohibits the publication of information that might disclose the affairs of a bank or customer, unless the prior consent of the data reporter has been properly obtained. In a few cases, the information published by the BoB allows direct or indirect disclosure of individual reporters. This situation arose due to the methodology used in the past which recommended aggregating data only for the commercial banks, with the data on savings banks and building societies disseminated separately. However, in the few cases where the information disseminated allows disclosure of individual reporters, the information disseminated by the BoB is of a nonconfidential nature.

Access to data is restricted to BoB-designated staff. Data stored electronically are password-protected and accessible only by BoB-designated staff. The BoB has in place a firewall software to prevent illegal access by third parties to the information stored in its computerized system. Confidentiality of the data is appropriately guarded during storage and during the process of destruction of records.

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

The *Banking Act* provides for a mandatory report of the monthly balance sheets of the commercial banks within 21 days after the end of the reference month and imposes penalties in case of noncompliance. Mandatory reporting by ODCs other than the commercial banks is clearly specified at the time the BoB issues licenses to these institutions to operate in Botswana. Penalties for noncompliance are very rarely employed as the BoB has relied successfully on moral persuasion.

0.2 Resources

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

Overall, the number of staff is adequate to perform current tasks. The section in charge of monetary statistics, MSS, has six professionals working full time on the compilation of monetary statistics—one senior economist, two economists, and three senior statistical assistants mainly responsible for data entry. Of these staff members, three hold a master's degree (two of them have pursued studies in the UK), one a bachelor's diploma, and the remaining two a certificate.

Although one member of the MSS staff has attended an IMF-abbreviated course on monetary and financial statistics, training of MSS staff has relied mainly on in-house training. The staff are not yet fully conversant of the relationships between the national financial reporting standards and the statistical methodology of the monetary and financial statistics, relying to a

great extent on the mechanical derivation of accounting data. Further training in the *Monetary and Financial Statistics Manual, 2000 (MFSM)* methodology is required.

Computer resources (hardware and software) used for compiling monetary statistics are generally adequate. All six compilers working in the MSS have a personal computer, although some computers need upgrading. Excel is the only software used for compiling monetary statistics. In the MSS, there are no computer applications for econometric purposes, cross-checking procedures, or seasonal adjustment of variables. Monetary data are stored on individual computers and the BoB mainframe. Regular backups are carried out and stored in a safe manner, including safe offsite storage.

Financial resources are adequate and subject to an annual budget cycle. Staff's remuneration is higher than comparable positions in the public sector, and benefits are more generous. Staff turnover at the BOB is generally low.

Recommendations: Ensure that all MSS economists attend the IMF course on monetary and financial statistics and that their skills are continuously developed as needed. Update computer resources on a regular basis to obtain further efficiencies in compiling and disseminating monetary statistics.

0.2.2 Measures to ensure efficient use of resources are implemented.

The main tools for ensuring efficient use of resources are the annual staff performance review and the allocation of resources through the annual budgeting process. The staff performance review develops a work program for each staff member, which is linked to the departmental work program that underlies the annual budgeting within the department and the entire BOB. In addition to its annual work program, the RD further develops a strategic framework to support longer-term planning. The RD has sought and received extensive technical assistance from the IMF and other sources.

Further expansion of the coverage of the monetary statistics to include ODCs will require additional resources. Generating electronically the monetary statistics from the BoB accounting systems and ensuring the electronic reporting by the ODCs could release some staff resources now heavily involved with data entry. These efficiencies would improve the timeliness of the monetary statistics currently disseminated, while expanding their coverage.

0.3 *Relevance*

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

On the occasion of Botswana's adherence to the General Data Dissemination System (GDDS) in 2002, users were invited to a workshop that included discussions on issues related to the relevance and analytical usefulness of official statistics disseminated in Botswana. The BoB encourages users to raise queries and requests directly to the RD staff, although it does not have a regular procedure to obtain direct feedback from users of monetary statistics. Meetings with policymakers to review monetary statistics and identify new data requirements take place when required. To keep abreast of emerging data requirements, RD staff attend statistics-related seminars and training courses held by international and regional organizations, and maintain informal contacts with the local community and main data users.

0.4 *Other quality management*

0.4.1 Processes are in place to focus on quality.

There is recognition throughout the BoB of the importance of having high-quality statistics for analysis of monetary conditions and formulating and implementing monetary policy. This awareness is evidenced by the country's subscription to the GDDS in 2002, the adoption of the plans for improvement of the monetary statistics soon after, and the co-chairing of the Statistics Producer Committee at the BoB high level. The importance of high-quality statistics is embodied in the BoB's mission statement.

0.4.2 Processes are in place to monitor the quality of the statistical program.

The BSD monitors regularly data reported by the ODCs to ensure that data-reporting practices are consistent with established guidelines. This responsibility is undertaken in cooperation with the MSS. In case of errors in the data submissions and/or nonreceipt of data, the supervisors contact the reporting institutions. Depending on the situation, MSS staff may also contact directly, informally or formally, the relevant reporting institution. Consistency is ensured with balance of payments data, and plausibility is monitored.

0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.

The BoB management recognizes the trade-offs among the dimensions of data quality. At this stage, the BoB regards accuracy as one of the most important dimensions of data quality. The emphasis on accuracy causes excessive long delays in disseminating the data and in reporting data to the IMF, particularly with regard to BoB data.

Recommendation: Make use of the dissemination of preliminary data in order to substantially reduce dissemination lags. Establish and make public a revision policy to allow users to gauge the reliability of the preliminary data to be disseminated.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

Pursuant to the *BoB Act*, the Ministry of Finance and Development Planning (MFDP) oversees the overall affairs of the BoB, with the overall responsibility for the operations of the bank vested in the BoB's board. The board comprises the governor, appointed by the president, the principal secretary of the MFDP, and seven members appointed by the MFDP. The board is responsible for ensuring that the BoB's principal objectives as set out in the *BoB Act* are achieved. The board is required to meet at least once each quarter, although typically it meets more frequently.

Although no law or formal provision supports professional independence, the culture of professionalism is strongly recognized and imbedded in the reporting arrangements and procedures in place. The RD staff feels free from undue influence or pressures from upper management and outside agencies in the conduct of their duties. Monetary statistics compilation arrangements, including training in the methodology and compilation methods, are supportive of the BoB's professional independence.

Staff professionalism is supported by BoB's recruitment and personnel policies, which take into account a candidate's qualifications; promotions are primarily merit-based. The BoB staff must observe proper conduct as regulated in the BoB's General Conditions of Service.

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

The choice of data sources, statistical techniques, and the timing, media, and other aspects of dissemination are based exclusively on statistical considerations. Monetary statistics are compiled from the accounting records and supporting schedules of the BoB and ODCs. Reporting forms mainly designed to meet the requirements of bank supervision are used for compiling monetary statistics.

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

The RD staff is subject to the communications policy of the BoB, which restricts the number of staff allowed to speak on behalf of the BOB. The BoB practice is to correct only factual errors and usually not debate interpretation even when it is grossly misleading. The RD staff follows informally the local newspapers and provides factual corrections when needed, directly through the RD management or through the BoB public relations officer. To prevent misinterpretation or misuse of statistics, the RD provides some explanations on the data disseminated in the *Botswana Financial Statistics (BFS)*, including footnotes to relevant tables.

1.2 Transparency

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

Although the *BoB Act* and the *Banking Act* are available on the BoB's website, these laws deal with more general matters than focusing on monetary statistics. The specific terms and conditions under which monetary statistics are compiled and disseminated are posted in the Botswana GDDS metadata disseminated on the IMF's Data Standards Bulletin Board (DSBB) website. These metadata are easily accessible to users of monetary statistics through a direct link from the BoB website to the IMF's website.

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

In general, there is no governmental access to the monetary statistics prior to their dissemination. However, because the principal secretary of the MFDP is a board member, there may be exceptional occasions when indirect access may occur immediately prior to dissemination. Also, monetary statistics end-of-year estimates are provided to the Minister of Finance and Development Planning for purposes of the budget speech before they are released. This is only partially identified in the GDDS metadata.

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

The monthly *BFS* is clearly identified as a product of the RD of the BoB. The *BFS* contains tables with monetary and other sectors' information, and each table clearly identifies its sources, as is the case with data compiled by other official agencies.

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

Advance notice is not given of major changes in methodology. However, the first page of the *BFS* contains a notice alerting readers to revisions in historical series, breaks, discontinuities, or changes in methodology. To facilitate data users, when new series are introduced the old series are also disseminated for a transition period. In an introductory section, the BoB comments on the most relevant changes observed during the reporting period and also provides notes explaining any methodological change that affects the published tables. Additionally, the tables contain methodological footnotes.

Recommendation: Provide advance notice of major changes in methodology, source data, and statistical techniques.

1.3 Ethical standards

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

New staff are informed about, and required to sign off on, the General Conditions of Service. The conditions include restrictions on political activities of staff, commitments to confidentiality and professionalism, financial disclosure, and avoidance of conflicts of interest. The BoB staff are prohibited from holding equity in financial institutions supervised by the BoB.

These conditions are rigorously enforced. Changes to them, as well as enforcement actions, are communicated to all staff on a regular basis. Cultural and management practices at the BoB enforce the ethical standards effectively.

Section 18 of the *BoB Act* deals specifically with conflicts of interest of its board members and its employees. Section 19 complements it, requiring from the personnel of the BoB an oath or declaration of secrecy on information related to the affairs of the BoB or any other bank or financial institution. A penalty of 25,000 pula or five years' imprisonment is prescribed for violators. Employees are fully aware of these guidelines since they are also included in the conditions of service.

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 analytical framework used by the BoB in compiling monetary statistics was substantially revised in 2005, and the concepts and definitions used follow to a great extent the *MFSM* in terms of identification of institutional units, instrument classification, and valuation of financial assets. Deviations from the *MFSM* are reviewed below (see 2.2, 2.3 and 2.4). To facilitate intertemporal consistency, the BoB has decided to disseminate also the monetary statistics compiled under the *Draft Guide to Money and Banking Statistics* in the *BFS* during a transition period.

The monetary aggregates compiled and disseminated by the BoB are as follow: *M1*, comprising notes and coins in circulation outside the depository corporations and transferable (demand) deposits in national and foreign currency of other financial institutions, local governments, public nonfinancial corporations, and private sector with depository corporations; *M2*, comprising *M1* and other deposits (call, savings, notice, and time) in national and foreign currency of other financial institutions, local governments, public nonfinancial corporations, and private sector with the depository corporations; and *M3*, comprising *M2* and securities issued by depository corporations held by other financial institutions, local governments, public nonfinancial corporations, and the private sector. Although the BoB continues to disseminate data on *M4* to facilitate the transition to the new series, the foreign currency accounts are now included in *M1* and *M2*.

The framework used provides measures of monetary aggregates based on a combination of liquidity and institutional factors that set a single delineation of money holding and money issuing sectors, as recommended.

2.2 Scope

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

For the purpose of this assessment, the scope of the monetary statistics refers to the Depository Corporations Survey (DCS), rather than the complete financial system. According to the *MFSM* methodology, all resident corporations that issue deposits or deposit substitutes included in the national definition of broad money should be included in the institutional coverage of the DCS.

In Botswana, the institutional coverage of monetary statistics includes the resident financial corporations that issue deposit-like liabilities included in the national definition of broad money, as recommended. As of December 2005, the financial sector of Botswana, consisted of (1) the BoB; (2) ODCs, comprising 6 commercial banks, 1 merchant bank, 2 other deposit-taking institutions (building society, and savings bank), and some small credit cooperatives; and (3) other financial corporations (OFCs), comprising 1 development bank (state-owned), 1 development corporation (state-owned), 1 entrepreneurial development agency (state-owned), 8 insurance companies, 87 pension funds, 3 asset management institutions administering 12 funds (operating under the *CIU Act*), 4 medical aid societies, 3 stockbroking companies, 1 special purpose vehicle, 1 offshore bank, and 37 exchange houses.

The OFCs subsector is relatively developed and diversified. At the end of 2005, the total assets of the pension funds exceeded those of the ODCs.

Recommendation: Expand progressively the coverage of the monetary statistics to the OFCs, starting possibly with quarterly data.

2.3 Classification/sectorization

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

The principles underlying the classification of financial instruments and the sectorization of institutional units are, in general, broadly consistent with the methodology of the *MFSM*. Sectorization first distinguishes between residents and nonresidents, and then delineates the various domestic sectors.

Following the sectorization recommended in the *MFSM*, economic units are grouped into financial corporations, central and local governments, public nonfinancial corporations, other nonfinancial corporations, and other residents. However, some shortcomings are in the sectorization of the institutional units, derived from limitations of existing source data (see 3.1.2). Some nonbudgetary central government units (parastatals) are classified as public nonfinancial corporations, and nonprofit institutions serving households are classified as nonfinancial corporations and not presented together with households and classified as other residents.

Also, shortcomings are in the classification of financial instruments, owing to the limitations of source data. Although financial instruments are classified based on the liquidity of the assets and liabilities as recommended, financial derivatives are classified as off-balance sheet items by the ODCs. Financial assets and liabilities denominated in domestic and foreign currency are not identified separately in the reporting forms. Also, not all repurchase

agreements are treated as collateralized loans, as recommended in the *MFSM* (see 3.1.1). Finally one of the ODCs, accounting for 25 percent of total loans in December 2005 classifies accrued interest on loans together with other receivables and two ODCs that accounted for 46 percent of deposits in December 2005 classify accrued interest on deposits together with other payables.

Recommendations: Establish a unified list on the sectorization of the institutional units to be adopted by all statistical producers. Disseminate this list on the BoB's website to guide the sectorization of institutional units by the ODCs. Improve the classification of financial instruments once better source data are available.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

In general, the financial statements are prepared on the historical cost basis as modified to include the revaluation of investments in domestic and foreign assets and liabilities.

Transactions denominated in foreign currency are translated into domestic currency at the bid exchange rates for all sales, and offer exchange rates for all purchases, at the transaction date. Stocks denominated in foreign currency are translated into national currency at the bid and offer exchange rates, respectively, at the close of the reference period. In general, exchange gains and losses realized on the disposal of financial instruments and unrealized exchange gains and losses are included in the income statement.

Unrealized revaluation gains and losses arising from changes in the market value of instruments classified as available for sale are recognized by the BoB in the Market Revaluation Account. When these instruments are disposed of, the related accumulated changes in the market value are included in the income statement. Realized and unrealized revaluation gains and losses in instruments classified as held-to-maturity are included in the income statement.

In general, held-to-maturity securities are carried at amortized cost using the effective yield method. Available-for-sale securities are first recognized at cost (which includes transaction costs) and subsequently remeasured at market prices or fair values based on quoted bid prices or, in their absence, based on appropriate valuation methods.

In the monetary statistics, the stocks of held-to-maturity securities other than shares and the liabilities in the form of securities other than shares are not restated at fair value, as recommended in the *MFSM*, although in the case of Botswana, this is not expected to have a statistically significant impact.

Loans are presented without adjustment for expected loan losses, and deposits are presented at book value as recommended.

The liabilities arising from the issue of Bank of Botswana's certificates are stated by the bank at a discount value, which excludes unearned interest included in the face value of the certificates, as recommended.

Flow data are not yet compiled.

Recommendations: Compile data on all loans and deposits based at book value (outstanding amount plus accrued interest). Estimate the valuation of held-to-maturity securities at fair values.

2.4.2 Recording is done on an accrual basis.

Interest income and expense are recognized in the income statement on an accrual basis. However, in some cases, accrued interest is recorded as "other assets" or "other liabilities" and in the monetary statistics are not presented together with the underlying instrument, as recommended in the *MFSM* (see 2.4.1).

In general, transactions are recorded when there is a change of ownership, on the basis of the market prices at which assets and liabilities are bought and sold, and when new securities are issued and securities are redeemed.

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

Data are collected on a gross basis; in particular, claims on a particular transactor or group of transactions are not netted against the liabilities to that transactor or group of transactions.

Fixed assets are not presented on a gross basis as recommended, although data on a gross basis and accumulated depreciation are available in the reporting forms.

When data are presented on a net basis, the underlying data on a gross basis are also presented, as recommended.

Recommendation: Compile fixed assets on a gross basis and present accumulated depreciation separately.

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.*

The source data do not provide the details needed as specified in the *MFSM*. There is a comprehensive and up-to-date register of all depository corporations, which are all licensed by the BoB. Register maintenance procedures are adequate for adding new units, deleting dead units, and monitoring mergers and other changes. The responsibility for maintaining the register for OFCs, or nondeposit-taking financial institutions, is divided between the BoB (CIUs and offshore banks) and the MFDP (insurance companies, pension funds, and holding societies). The sectorization of the financial corporations in subsectors (ODCs and OFCs) undertaken by these institutions is not fully aligned with the *MFSM*.

Institutional and geographic coverage of the depository corporation sector is almost complete. The lack of coverage of the savings cooperatives, estimated to account for less than 1 percent of total deposits, does not lessen the analytical usefulness of the monetary statistics.

Report forms used for compiling monetary statistics were developed to meet the BoB's banking supervision needs and were last updated in October 2001. These forms do not contain sufficient details to compile the sectoral balance sheet-stock positions recommended in the *MFSM*—central bank, ODC, and depository corporations sectoral balance sheets—fully classified by currency, financial instrument and economic sectors (see 2.3.1). Examples of current shortcomings in the BOB source data include the breakdown between securities—other than shares and shares and other equity in foreign reserves managed by Fund managers estimated based on data for December 2003—and the sectorization of the BOB certificates held by other than the commercial banks. Source data for the ODCs do not differentiate between accounts in national and foreign currency. Financial derivatives, which represented 4 percent and 8 percent of commercial banks' total assets in December 2005 and June 2006, are classified off-balance sheet. Also data on shares and other equity include some instruments that qualify as tier-two capital in Botswana but do not qualify as shares and other equity as defined in the *MFSM*.

The forms for the BoB and each ODC are provided in hard copy to MSS and consist of very summary balance sheets and several accompanying schedules with supplementary information (5 schedules for the BoB and 21 for the ODCs). Data are manually entered into an Excel spreadsheet and electronically aggregated to produce consolidated sectoral balance sheets and surveys. Data entry is checked mostly manually, although, to the extent possible, automatic consistency checks have been integrated in the spreadsheet.

As part of the BSD's ongoing computerization project, the BSD has initiated a revision of the report forms to better respond to the BoB's current supervisory needs. Monetary statistics compilers will be involved in this revision, which is expected to be finalized in 2007.

Recommendations: Report the BoB's detailed accounting data to the MSS in electronic form. Review the report forms used by the ODCs to ensure complete, relevant, and timely information for supervisory and statistical purposes, with the minimum response burden for data reporters. Fully use computing technology to ensure electronic reporting of ODCs data. Involve ODCs in the development of the report forms at an early stage to facilitate the reporting of the new requirements from available software systems.

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

The BoB's financial statements adhere closely with the International Accounting Standards and are audited by an international firm of certified public accountants. The ODCs' financial statements are also adhered to closely with these standards and are audited by international firms of certified public accountants.

However, the data sources for compiling monetary statistics (summary balance sheets and accompanying schedules) do not provide sufficiently detailed and comprehensive information to allow the classification of all financial instruments disaggregated by currency and economic sectors, and the consistent presentation of accrued interest together with the underlying instrument, as recommended in the *MFSM*.

Recommendation: (See 3.1.1.)

3.1.3 Source data are timely.

The BoB data become available to the MSS with an excessively long time lag (about six weeks), which does not allow Botswana to meet the GDDS recommendations on the timeliness of the central bank data (see 4.1.2).

The ODCs report monthly data within 21 days after the end of the reference month. Although the availability of the ODC data is sufficient to allow Botswana to meet the GDDS recommendations on the timeliness of the ODC data, under present reporting procedures (paper-based), the timeliness of reporting would not be sufficient to meet the Special Data Dissemination Standard (SDDS) timeliness requirements (see 4.1.2).

Recommendation: Report BoB monthly preliminary data to the MSS no later than 21 days after the end of the reference month. Reduce the time lag for reporting ODC data and/or establish mandatory electronic reporting to all ODCs.

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.

The BSD and MSS routinely analyze the source data for accuracy, and manual assessment procedures are sound. Cross-validations test the internal consistency of each institution's data submission. Monetary statistics compilers also perform additional validations and verify with respondents any data inconsistency or out-of-trend values. The ODCs are requested to provide explanations and, when needed, to resubmit the data with corrections to the BoB.

Procedures are in place for addressing data compilers' queries concerning source data. Compilers directly contact reporting institutions to obtain clarifications, and they consult with the BSD as needed.

3.3 Statistical techniques

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

Monetary statistics are almost exclusively based on balance sheet data, and they do not, by and large, rely on the use of statistical techniques. Usually, data submissions from ODCs are timely and complete, and there are no instances of the need for imputation and adjustment for nonresponse. A software for seasonal adjustments of monetary aggregates is not available.

Recommendation: In cases of nonresponse within the established timetable, estimate the missing observation (e.g., based on the share of the reporting institution in the total aggregates, using the last balance data available for that institution) and disseminate preliminary information. Once the missing data are received, revise the preliminary data with final data.

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

Monetary statistics are based solely on accounting data, and no data adjustments or transformations are undertaken. New balance sheet data are cross-checked with past series. Details that are provided in accompanying schedules are cross-checked with totals provided

in the summary balance sheets through links imbedded in the Excel tables used to compile monetary statistics. If errors are large and cannot be accounted for, the source is contacted and requested to resubmit correct data. Resubmission, although rare, is done before the final data are disseminated.

The BoB does not disseminate seasonally adjusted monetary statistics.

3.4 Assessment and validation of intermediate data and statistical outputs

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

Monetary series are compared with related series and indicators to check their consistency. The MSS validates its data against international reserves data in the balance of payments but does not cross-check data on net credit to the central government with the MFDP data.

Recommendation: Routinely use other information available to cross-check balance sheet data reported by the BoB and ODCs (e.g., data from the MFDP on the deposits placed at depository corporations; data on the BoB's outstanding certificates; and regulatory agencies' data on the holders of government securities, on securities other than shares of the ODCs, and on holdings of shares and other equities of the ODCs).

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

The MSS investigates statistical discrepancies regularly. The positions between the BoB and the ODCs and among ODCs are cross-checked, and the reasons that contribute to any discrepancies are investigated. When a large discrepancy is noted, the MSS contacts the financial corporation to seek an explanation and requests the resubmission of corrected data.

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

Once detected, statistical discrepancies are investigated and acted upon. Flow data are not yet compiled to allow reconciliation of financial flow data with changes in the corresponding stock.

3.5 Revision studies

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

The BoB's policy is to disseminate only final data, and therefore there is no stated policy to conduct studies or analysis of revisions on a routine basis. Notwithstanding this, when the

need arises, the BoB revises the monetary statistics reporting forms, methodology, and compilation practices. This was the case with the revision of the report forms in 2001 and the introduction of the standardized forms to report monetary statistics to the IMF following the methodology recommended in the *MFSM*. Methodological changes triggered by these reviews are presented as notes in the introduction to the *BFS* and annotated in the corresponding tables.

Recommendation: Conduct periodic analysis of data revisions (e.g., preliminary data against final data) and incorporate the findings to improve preliminary data to be disseminated.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The central bank survey and the DCS are disseminated on a monthly basis, which is consistent with the specifications of the GDDS and SDDS.

4.1.2 Timeliness follows dissemination standards.

The timeliness of the dissemination of the central bank surveys lags well behind GDDS recommendations, while that of the ODCs survey is on the upper limit of the timeliness recommended. As of mid-November 2006, the latest available data for the BoB correspond to end-July 2006, and for the ODCs correspond to end-August 2006. The BoB disseminates data on commercial bank credit (monetary policy target) before the end of the month following the reference month.

Recommendation: Disseminate BoB preliminary data no later than two months after the reference month (GDDS).

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

In general, the monetary statistics are consistent within the dataset. The central bank survey presents details on assets and liabilities to the ODCs and vice-versa in the ODCs' survey. Assets and liabilities of the BoB and ODCs are consolidated within the DCS, and any discrepancy is included in other items net, as recommended. The ODCs' interbank position for current periods shows an acceptable level of discrepancy.

Statistics for the entire financial corporations sector and the flow-of-funds accounts are not compiled to allow further consistency checks.

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

The time series published in the *BFS* (in most cases, covering over a 10-year period) are consistent over time, and breaks in series are explained in the introductory notes when they first appear and are clearly annotated in the corresponding tables. New time series on the central bank, ODCs, and depository corporations surveys following the *MFSM* started being disseminated in February 2006, and historical data reconstructed for five years (starting at end-December 2001) are disseminated in the *BFS*.

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

Monetary statistics are largely consistent with external sector statistics. The net foreign assets presented in the monetary statistics, including the BoB's external reserves, are largely consistent with the corresponding measure derivable from the balance of payments and international investment position.

Differences in monetary and government finance statistics are largely attributable to differences in the timing of recording.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

Monetary statistics disseminated by the BoB are considered final and therefore are not subject to a regular revision cycle. In practice, revisions to data disseminated are very infrequent, and when they occur the reasons for the revisions are clearly annotated in the corresponding tables (e.g., reclassification of off-balance sheet items resulting from the revision of the reporting forms in 2001). There is no regular schedule to undertake revisions of reporting forms, methodology, and compilation practices, and they take place when deemed necessary (e.g., new requirements prompted by changes in international accepted standards and methodologies, namely the *MFSM*).

Recommendation: Adopt and make public a revision policy so that users and data reporters are informed of the revision schedule of preliminary data to be disseminated, report forms, and major changes in methodology.

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

The monetary tables in the *BFS* do not contain any preliminary data (data disseminated are final). In the rare instances of revisions (e.g., made in 1994 following the improvement of the interbank positions and in 2001 following the revisions of the report forms on off-balance sheet data), users were informed of the revisions at the time of dissemination.

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

Except for the explanatory notes in the introduction of *BFS*, analyses of revisions to data are not made available to the public.

Recommendation: Inform users of the results and analysis of the revision to statistics.

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).*

The *BFS* presents monthly monetary statistics, including the surveys recommended in the *MFSM*, several tables on the monetary and credit aggregates and their components, and tables that allow users to cross-check the data disseminated (e.g., statistics on BoB certificates outstanding disaggregated by holding sectors). To facilitate proper interpretation, the *BFS* contains a section on “BFS Highlights” that explains major changes occurred in the variables with cross-references to the corresponding tables. The BoB’s annual reports include a separate section dedicated to statistics and present charts to facilitate their interpretation. The *BFS* and the annual reports are disseminated on the BoB’s website and in hard copy. The *BFS* statistics disseminated on the website include time series available in Excel files.

The statistics disseminated in the annual reports and *BFS* are reviewed on a regular basis to ensure dissemination of relevant data and enhance their presentation. The last review was undertaken in February 2006 (*BFS*) and 2005 report (annual report), to include the dissemination of the DCS recommended in the *MFSM*.

5.1.2 *Dissemination media and format are adequate.*

Monthly monetary data are available to the public through the *BFS* posted on the BoB’s website. The hard copy is distributed free of charge in Botswana to recipients included in a distribution list, is available on the BoB’s library, and is made available to anyone free of

charge upon request. The BoB's annual reports can be downloaded from the bank's website also free of charge. The annual reports of the BoB and ODCs are available in the BoB's library.

5.1.3 Statistics are released on a preannounced schedule.

The approximate release date of the monthly monetary statistics is announced in the *BFS*, both hard copy and electronic versions. Dissemination on the website normally takes place as announced, although the hard copies take longer to be published.

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

The *BFS* is posted on the Internet and made available to all users at the same time. The hard copy is distributed through a mailing list. Users also can have access to it through direct contact with the RD or by visiting the BoB's library.

5.1.5 Statistics not routinely disseminated are made available upon request.

Upon request, the BoB provides unpublished and nonconfidential data free or charge. Users are aware they may contact the principal economist in the SISU, whose contact details are included in the *BFS*. Contact points are also included in the GDDS metadata.

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.

A summary description of the methodology adopted to compile monetary statistics is available in Botswana's metadata posted on the IMF's DSBB website. To facilitate users' access to these metadata, a direct link is provided between the BoB's website and the metadata posted on the IMF's DSBB website.

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

Users are informed of compilation methods only through the GDDS metadata. The tables disseminated in the *BFS* include explanatory notes, and the derivation of the monetary aggregates national definitions is presented as memorandum items. There is no comprehensive methodological note available to users.

Recommendation: Prepare and disseminate on the BoB website more detailed information on the concepts, scope, classifications, basis of recording, data sources, and statistical techniques, highlighting the differences from the MFSM recommendations.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

Contact information (e-mail addresses and telephone numbers) of compilers/analysts are disseminated in the *BFS* and the *GDDS* metadata.

5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.

The list and prices of BoB's publications are included in the *BFS*. The hard copy encourages users to use the BoB's website from which most of the publications listed can be downloaded free of charge.

Table 5. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Monetary Statistics
(Compiling Agency: Bank of Botswana)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Not Observed; SDDS = Complies with SDDS Criteria

Element	NA	Assessment				Comments on Assessment	Plans for Improvements and Target Dates
		O	LO	LNO	NO		
0. Prerequisites of quality							
0.1 Legal and institutional environment		X	X			Staff needs further training. No database software. Some computers need upgrading.	
0.2 Resources							
0.3 Relevance		X	X			Emphasis on accuracy undermines timeliness of dissemination, particularly of BoB's data.	
0.3 Other quality management							
1. Integrity							
1.1 Professionalism		X	X				
1.2 Transparency						Internal government access to data only partially identified in GDDS metadata. No advance notice of major changes in methodology.	
1.3 Ethical standards		X					
2. Methodological soundness							
2.1 Concepts and definitions		X				Financial derivatives classified as off-balance sheet items. Some nonbudgetary central government units (parastatals) are classified as nonfinancial public corporations; Nonprofit Institutions Serving Households (NPIs) are classified as nonfinancial private corporations.	
2.2 Scope		X	X				
2.3 Classification/sectorization							
2.4 Basis for recording			X				
3. Accuracy and Reliability							
3.1 Source data					X	Report forms developed for banking supervision purposes; financial derivatives classified as off-balance sheet items; repurchase agreements not consistently identified; positions in domestic and foreign currency not separately identified. BoB data available with an excessively long time lag. Hard copy-based collection system requires full manual	

Table 5. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Monetary Statistics
(*Compiling Agency: Bank of Botswana*)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Not Observed; SDDS = Complies with SDDS Criteria

Element	NA	Assessment			Comments on Assessment	Plans for Improvements and Target Dates
		O	LO	LNO		
3.2 Assessment of source data		X			data entry.	
3.3 Statistical techniques			X		No software for estimations and seasonal adjustments of monetary aggregates.	
3.4 Assessment and validation of intermediate data and statistical outputs			X		No routine cross-checking of information against GFS and limited other cross-checking.	
3.5 Revision studies			X		No formal revision studies are carried out, although revisions are reviewed and appropriate action is taken to eliminate the source of errors.	
4. Serviceability						
4.1 Periodicity and timeliness			X		BoB's timeliness does not meet GDDS recommendations.	
4.2 Consistency			X		Not fully consistent with GFS.	
4.3 Revision policy and practice			X		No formal revision policy as the policy is to disseminate only final data. However, the policy is not clearly stated.	
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility			X		No detailed methodological documentation.	
5.3 Assistance to users		X				

VI. 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 mandate for compiling and disseminating balance of payments statistics rests with the Bank of Botswana (BoB) by informal agreement with other government bodies, including the Central Statistics Office (CSO). On this basis, the BoB has compiled balance of payments data since the late 1970s, and its mandate has never been challenged. The informal agreement is consistent with the assignment of responsibilities. The BoB is the sole agency in Botswana that produces and disseminates balance of payments statistics. There is no evidence of duplication of efforts.

The BoB's Research Department (RD) is in charge of compiling and disseminating balance of payments statistics. The RD is composed of five units, each reporting to a deputy director. The Statistics and Information Service Unit (SISU), responsible for compiling statistics used internally by the BoB and disseminated to the public, as well as the National Economics Unit, report to one deputy director. The main data users, i.e., the units responsible for money and financial markets, international finance and trade, and modeling and forecasting, report to the other. Balance of payments statistics are compiled by the Balance of Payments Statistics Section of SISU.

Recommendation: Establish a formal intragovernmental agreement and implement a change of the Bank of Botswana Act (the BoB Act) or another form of clear, legal mandate to clarify the responsibility of the BoB for compiling balance of payments data. This would prevent any possible future challenges to the BoB's role as compiler and might serve to strengthen its mandate to collect relevant information.

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

There are established channels for sharing data between the BoB and other data-producing agencies, notably the CSO. Other data for balance of payments compilation are obtained from the Ministry of Finance and Development Planning (MFDP), the Department of Tourism, the Ministry of Foreign Affairs, government-owned companies, and numerous other agencies. Data sharing and coordination among these entities are adequate, although requests made by the BoB concerning data quality, timeliness, and classification have not been addressed in some cases. The Ministry of Education used to supply data on Botswana students abroad but has stopped reporting, while efforts to obtain data from the Ministry of

Health have not succeeded yet. The BoB does not enjoy direct access to customs data and coordinating data needs with the customs service has not been straightforward.

In 2002 the Statistics Producer Committee—chaired by the BoB’s deputy governor, the secretary of the Division of Budget Administration (DBA) of the MFDP, or the director of the CSO on a rotating basis—was established to facilitate data sharing and cooperation between the BoB and other official agencies. This committee meets about three times a year to promote the proper understanding of data requirements, discuss procedures for the effective flow of source data, and avoid any duplication of efforts. In addition, the RD’s deputy director in charge of statistics serves as the liaison on emerging statistical issues between the BoB, the MFDP, and the CSO.

Recommendation: Improve lines of communication for data sharing. Delays in exchanging data, as well as lack in responsiveness for data classification and detail of presentation, adversely impact the timeliness and accuracy of compiling balance of payments statistics. The BoB should enjoy access to customs data, and the CSO should document what processing is carried out on trade data.

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

Section 19 of the *BoB Act* states that no official or employee of the bank shall disclose to any person any information relating to the affairs of the BoB, any other bank, financial institution, business, or person, which has been acquired in the performance of his duties or the exercise of his functions. Survey respondents and other providers of information are assured that the information provided by them will be handled confidentially, and no cases are known where the confidentiality has been violated.

In a few cases, the information published by the BoB allows direct or indirect disclosure of individual reporters. This situation arises due to the small size of the economy and the fact that some sectors are dominated by few companies; hence, aggregation cannot always ensure confidentiality of company data. For example, three important export products (raw diamonds, beef, and soda ash) are produced and exported by only one company per product. The BoB views that public interest in these data outweighs concerns about confidentiality. Since these data are related to core indicators of economic activity in Botswana, they are in the public domain in any case. Other large transactions, such as large individual investment flows, also are reported regularly in the press before balance of payments statistics are released.

Only staff responsible for compilation have access to raw and intermediate data. Data stored electronically are password-protected and accessible only by BoB-designated staff. The BoB has in place a firewall software to prevent illegal access by third parties to the information

stored in its computerized system. Confidentiality of the data is appropriately guarded during storage and during the process of destruction of records.

Recommendation: The BoB should seek to formalize its relationship with data reporters whose data could be subject to direct or indirect disclosure, either by seeking agreement from the affected companies or defining and publicly stating the limits of data confidentiality.

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

The *BoB Act* 1996 (Section 59) empowers the BoB to request information it may require for the discharge of its responsibilities from any person or entity, and stipulates a penalty for noncompliance and for reporting of false or misleading information. The *BoB Act* does not specifically identify the compilation of balance of payments statistics as the BoB's responsibility. Therefore, the applicability of this provision depends on the informal intragovernment agreement that the BoB assumes this responsibility.

Under the previous foreign exchange control regime (no longer functioning), banks were obliged to report foreign exchange transactions to the BoB. Although the primary purpose of the reporting requirement was to meet the operational needs of implementing exchange controls, these data constituted an important data source for compiling of balance of payments statistics. Following gradual removal of foreign exchange controls during the 1990s, the reporting requirement for banks and some other foreign exchange dealers was continued. The Balance of Payments Statistics Unit processes these data.

Penalties for noncompliance have never been employed by the BoB; instead, the BoB has relied on moral persuasion. In the case of surveys, respondents are not informed about penalties since the BoB prefers to develop and maintain cordial relationships with data reporters. Generally, this approach has ensured good success in data gathering. Relatively low survey response rates should be improved, and BoB compilers have to strike a balance between cordial relations and affirmation of their mandate.

0.2 Resources

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

In general, staff resources are adequate for compiling balance of payments statistics at the General Data Dissemination System (GDDS) level. The section in charge of balance of payments statistics has 10 full-time staff comprising one senior economist, three economists, and six statistical assistants. Five statistical assistants are mainly responsible for data entry (bank reporting on foreign exchange transactions). Of these staff members, two hold a

master's degree, while others hold bachelor's degrees and other tertiary education certificates.

Specific training needs are identified as part of the annual performance review. Three members of the unit have attended the IMF course on balance of payments statistics at headquarters. The training program further includes in-house training and participation in relevant meetings and workshops. The staff showed a good knowledge of the methodology employed in compiling balance of payments statistics.

Computer resources (hardware and software) used for compiling balance of payments statistics are broadly adequate. All 10 compilers have a personal computer, although some computers need upgrading (compilers who handle large datasets require computers with strong processing capability). Access and Cheetah software programs are used for balance of payments statistics compilation. Cheetah is a specialized package, now exclusively supported by the BoB's information technology division. BoB compiling staff report increasing problems in maintaining the program and consider it necessary to plan for its replacement. Balance of payments data are stored on individual computers and the BoB mainframe. Regular backups are carried out and stored in a safe manner, including offsite.

Financial resources are adequate and subject to an annual budget cycle. Staff remuneration is competitive. The BoB pays higher wages than other public sector employees for comparable positions and provides more generous benefits. Remuneration and benefits also remain attractive in comparison to the private sector, although some sectors (including economic consultancy and banks) tend to pay higher wages for comparable positions. Staff turnover at the BoB is generally low.

Further development of the statistics work program and planned improvements in the timeliness, periodicity, detail, coverage, and accuracy will require further resources. In particular, the move away from bank transactions reporting and toward other data sources will require well-trained staff for conducting surveys, coordinating data generation efforts with other agencies, and analyzing administrative data. Efforts to subscribe to the Special Data Dissemination Standard (SDDS) imply enhanced periodicity and timeliness that is unlikely to be achieved with the current resource establishment.

Recommendation: The BoB should invest in sufficient staff numbers, their training, and related resources (IT, transport, etc.). Abolishing bank transactions reporting and related processing will free five research assistants. These staff will require additional technical knowledge and skills for conducting surveys and developing new data sources. Therefore, the BoB should consider training existing research staff for these new roles.

0.2.2 Measures to ensure efficient use of resources are implemented.

The main tools for ensuring efficient use of resources are the annual staff performance review and the allocation of resources through the annual budgeting process. The staff performance review develops a work program for each staff member, which is linked to the departmental work program that underlies the annual budgeting within the department and the entire BoB. In addition to its annual work program, the RD further develops a strategic framework to support longer-term planning.

While measures are in place to ensure efficiency in individuals' work programs and departmental planning, efficiency measures on the divisional level are less developed. Within the Balance of Payments Section, resource allocation could be improved by replacing foreign exchange reporting with other data sources. Five staff mainly enter and process foreign exchange transactions forms obtained from banks. The resulting data are used to compile some items on trade in services, but the coverage and accuracy of these data are considered so low that their use as a secondary data source for other items is doubtful.

Recommendation: Management should implement measures to assess the efficiency of resource allocation within units and divisions. This would include making judgments about the costs and benefits of particular data sources and methods. As a current priority, management should evaluate whether staff and other resources could be redeployed from processing bank reports on foreign exchange transactions to address other needs (such as surveys) and produce data of higher quality. Retraining is probably required. Replacing foreign exchange reporting with other data sources takes time since new sources have to be developed. However, planning and development could be initiated now.

0.3 Relevance

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

The BoB encourages users to raise queries and requests directly to relevant staff, although it does not have a regular procedure to obtain direct feedback from users of balance of payments statistics. However, each year a series of briefing meetings is held following the release of the BoB's *Annual Report*. These meetings, held separately for various user groups including the cabinet, business leaders, financial institutions, parliament, and the media, cover, among other topics, balance of payments data. Further meetings with policymakers to review balance of payments statistics and identify new data requirements take place when required, on request by either party. On the occasion of Botswana subscribing to the GDDS in 2002, users were invited to a workshop that included discussions on issues related to the relevance and analytical usefulness of official statistics disseminated in Botswana.

To keep abreast of emerging data requirements, staff attend statistics-related seminars and training courses held by international and regional organizations, and maintain informal contacts with the local community and main data users.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The BoB recognizes the importance of having high-quality statistics for economic analysis and policy implementation. This awareness is evidenced by the country's subscription to the GDDS in 2002, the adoption of the plans for improvement of balance of payments statistics soon after, and the co-chairing of the Statistics Producer Committee. The importance of high-quality statistics is embodied in the BoB's mission statement.

0.4.2 Processes are in place to monitor the quality of the statistical program.

Management is regularly informed about the quality aspects of the statistical program. The BoB undertakes reviews to identify problems at the various stages of collecting, processing, and disseminating of data. Consistency is ensured across datasets (where applicable), and plausibility is monitored. On the output end, the BoB regularly monitors data of public and banking sectors and high-valued transactions of nonbank corporates and makes inquiries from involved institutions in the case of doubtful transactions.

0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.

The BoB management recognizes the tradeoffs among the dimensions of data quality (e.g., between timeliness and accuracy/reliability). At this stage, the BoB regards accuracy as one of the most important dimensions of data quality. The emphasis on accuracy, including the attempt to avoid sizable revisions where possible, causes rather long delays in publishing final data and in reporting data to the IMF. However, preliminary data are released in a timely fashion.

Recommendation: The BoB should address timeliness and periodicity issues more explicitly and set out plans for their improvement in the departmental or divisional work plan. Also, the BoB management should decide on further important data accuracy improvements concerning resource allocation (replacing the bank reporting system) and means to strengthen institutional cooperation.

1. Assurances of integrity

1.1 Professionalism

1.1.1 *Statistics are produced on an impartial basis.*

Although no law or formal provision supports professional independence, the culture of professionalism is strongly recognized and imbedded in the reporting arrangements and procedures in place. The BoB compiling staff asserts that the quality of the compilation has never been negatively affected by external pressures.

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

Data sources are selected on the basis of availability, considerations of data accuracy, completeness, and timeliness, as well as practicality and resource availability. The gradual move away from the reliance on bank reporting toward survey data and, in some cases, administrative sources is based on the assessment of the relative merits of these sources. The selection of statistical techniques is informed by the knowledge and experience of compiling staff, advice received from various technical assistance projects, and practical considerations.

The forms of dissemination of data are determined outside the unit responsible for statistics. The release of preliminary balance of payments data to the MFDP, and then by its minister to the public in the budget speech, is determined by political priorities. The BoB senior management determines data publication in the BoB's *Annual Report* and the *Botswana Financial Statistics (BFS)*.

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

The RD, and with it the statistics compilers, is subject to the communications policy of the BoB, which restricts the number of staff allowed to speak on behalf of the BoB. It is normal BoB practice to correct only factual errors and not debate interpretation even when it is grossly misleading. In cases where comments are made by the BoB on erroneous presentation of balance of payments statistics to the public, a public relations officer issues a statement based on compiling staff's input.

1.2 *Transparency*

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

GDDS metadata are available to the public through the DSBB website, to which the BoB website provides a direct link. Currently, available GDDS metadata are not entirely up to date. No other information on the terms and conditions of compilation is available, although methodological notes accompany the publication of data in the *BoB Annual Report* when necessary.

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

The BoB management and other government agencies enjoy prior access to statistics, as do selected relevant data users in the BoB. The BoB compiling staff reports that the access is unlikely to affect significant policy decisions prior to the publication of these data due to the short interval between internal access and public release. However, there is no guidance on who would have access at what time. Preliminary data are used for briefing the BoB senior management and board. Through these channels, department heads at the BoB and various management at the MFDP enjoy prior access. Requests for data by other government departments in the course of their work are considered case-by-case.

The practice of using balance of payments estimates for briefing the BoB management and board, or providing data to other government agencies on request, is not publicly identified in any data source in Botswana. GDDS metadata partially identify prior access, but metadata are only available from the Dissemination Standards Bulletin Board (DSBB) website of the IMF, and the BoB's data publications do not bring this website or the existence of metadata to the attention of data users. The public is probably aware of prior access to data by the government since the budget speech, given by the minister of the MFDP, is in fact a point of release of initial estimates. In this case, balance of payments data are provided to the MFDP in preparation for the budget speech and the accompanying *Annual Economic Report*.

Recommendation: The BoB should clarify the nature and extent of prior access to data in published metadata. It would be useful to establish precise rules about access to data prior to their release.

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

The monthly *BFS* is clearly identified as a product of the RD of the BoB. The *BFS* contains numerous tables with external sector information, and every table clearly identifies its sources (some data published in the *BFS* are obtained from other official agencies).

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

Advance notice is not given of major changes in methodology. However, the first page of the *BFS* contains a notice alerting readers to revisions in historical series, breaks, discontinuities, or changes in methodology. In an introductory section, the BoB comments on the most relevant changes observed during the reporting period and also provides detailed notes explaining any methodological change that affects the published tables. The BoB *Annual Report* also highlights important methodological issues in its statistical section. Additionally, the tables in both the *BFS* and the *Annual Report* contain methodological footnotes. However, methodological issues are not sufficiently clear from the tables. Data users who do not consult the highlights and statistical issues sections of the *BFS* and *Annual Report* are likely to remain unaware of methodological changes.

1.3 Ethical standards

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

New staff are informed about, and required to sign off on, the General Conditions of Service. These conditions include restrictions on political activities of staff, commitments to confidentiality and professionalism, financial disclosure, and avoidance of conflicts of interest. The BoB staff are prohibited from holding equity in financial institutions supervised by the BoB.

These conditions are rigorously enforced. Changes to them, as well as enforcement actions, are communicated to all staff regularly. Culture and management practices at the BoB enforce the ethical standards effectively.

Section 18 of the *BoB Act* deals specifically with conflicts of interest of its board members and its employees. Section 19 complements it, requiring from the BoB personnel an oath or declaration of secrecy on information related to the affairs of the BoB or any other bank or financial institution. A penalty of 25,000 pula or five years' imprisonment is prescribed for violators. Employees are fully aware of these guidelines as they are also listed in the conditions of service.

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 structure, concepts, and definitions of the balance of payments statistics follow guidelines in the *Balance of Payments Manual*, fifth edition (*BPM5*). The double-entry system is applied as the basic principle, with the statistical discrepancies recorded in errors and omissions. In principle, a clear distinction is made between income components and goods and services components.

The financial account separately records transactions in assets and liabilities. Direct investment, including reinvested earnings, is recorded on a directional basis. Key concepts and definitions are broadly in accord with the guidelines of *BPM5*.

Resident institutional units are defined in conformity with *BPM5* and relate to those that have a center of economic interest in Botswana. The one-year rule is applied in assessing the residency status of individuals, with the exception of Botswana workers in South African mines. These workers are classified as Botswana residents, although many work in South Africa for periods exceeding one year on successive work contracts. The BoB maintains that sufficient evidence indicates that these workers' maintain their center of economic interest in Botswana.

The classification of types of transactions follows *BPM5* concepts. Balance of payments transactions are defined in principle as all transactions by resident economic entities with nonresidents. Transactions include both exchanges and unrequited transfers. The identification of transactions mostly follows *BPM5* guidance. However, the BoB did not report realized valuation gains and losses of its foreign reserves as transactions in balance of payments data. This omission has been identified and is being corrected.

2.2 Scope

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

In principle, the balance of payments statistics cover all transactions between residents and nonresidents. In practice, lack of data prevents the compilation of data on trade in goods not reported by customs, such as shuttle trade, Internet commerce, and smuggling, and no adjustments are made for them. Data on these types of transactions are difficult to obtain, but the BoB is exploring potential approaches to developing estimates. Also, the compilation

approach relies on the assumption that all large, formal, sector imports are cleared by customs even when these goods do not pass customs borders (e.g., commercial aircraft). Foreign embassies located in Botswana are in principle treated as nonresident, but data on their transactions with resident entities are also only partially available.

The International Transactions Reporting System (ITRS) covers cash transactions involving foreign exchange. It ensures neither that all reported transactions are between residents and nonresidents nor that all resident-nonresident transactions are reported. Data on services, income, and transfers, largely obtained from the ITRS, are inadequate in ensuring that all resident-nonresident transactions are covered, in part due to the misclassification of transactions by reporting entities. The BoB, aware that the ITRS provides insufficient accuracy and coverage, is exploring alternative data sources.

2.3 Classification/sectorization

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

Institutional units are classified according to *BPM5*. Transactions are classified to relevant items, with sectoral breakdown in accordance with the sector of transactor, where applicable. However, classification problems can arise from data sources, in particular, administrative sources compiled by ministries and agencies using definitions and classifications that deviate from *BPM5*. For example, the BoB compilers need to ensure that government debt data do not include debt of government-owned corporations, or that fees earned by the Civil Aviation Department are appropriately classified as transfers, not services. The BoB tries to identify such deviations and keeps source data under review.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The principle of market valuation specified in *BPM5* is used to value transactions. In instances where no market prices are observed, prices of similar transactions or best estimates are used as a proxy. The value of transactions is reported separately from related charges, fees, and transaction services. Import values are reported in customs data on a c.i.f. basis and adjusted to f.o.b. values using benchmark data obtained in the early 1990s. Transactions between affiliated enterprises are recorded at the value provided by the data provider.

Survey forms clearly state the procedure for market value estimation in the case where no actual market value is available. As specified in *BPM5*, transactions in foreign currency are converted using the midpoint exchange rate prevailing in the market on the transaction date.

When the transaction date cannot be determined precisely, the average midpoint exchange rate for the reporting month is used.

In cases where transactions are calculated from changes in stocks, transactions are derived from changes in the stock during the reporting period, without appropriate calculations to exclude valuation and other changes. Transaction estimates derived from stock data are typically calculated from stock values reported in their domestic currency equivalent.

Recommendation: The BoB should seek, and the CSO should provide, data on f.o.b. import values reported by importers. The BoB and CSO should review these data and determine whether they approximate BPM5 definitions of f.o.b. values. If this is not the case, the BoB should conduct a review of the benchmark values for freight and insurance. For the estimation of transactions from stock data, estimates for valuation and other changes should be derived first.

2.4.2 Recording is done on an accrual basis.

Generally, accrual accounting is used for recording transactions. In recording exports, compilers use direct reports from major export companies, which are superior to customs data in recording the exact timing of change of ownership. Items obtained solely from ITRS are cash-based. As a result, some items in services (not travel receipts) and transfers are cash-based. Data obtained from the MFDP's CFU are reported on a cash basis, including debt and income data relating to government. Overall, efforts are made to use accrual principles.

Recommendation: Develop alternative data sources to the ITRS, thereby changing items from cash to accrual accounting. The MFDP should compile and report data from the CFU on an accrual basis.

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

Grossing and netting procedures follow international guidelines. Current account transactions are generally recorded on a gross basis, while financial account transactions are recorded on a net basis, separately for the individual asset and liability components. Deviations are possible where ITRS data are used, owing to the netting of settlements by transactors (including exchange bureaus). The BoB keeps this under review. However, only new data sources are likely to resolve any deviations.

Recommendation: Develop additional data sources on services and transfers.

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.

The composition of data sources includes the customs data, administrative data, the ITRS, selected surveys, and direct reporting by government ministries, agencies, and public and private enterprises. Data on almost all items in the balance of payments statistics are available (the exceptions include unrecorded trade). These data sources provide broad, but not fully sufficient, coverage for the recording of balance of payments transactions.

Since the BoB does not have direct access to data from the customs department, it obtains trade data from the CSO after some data processing. Since the CSO does not provide information on the nature of their processing, appropriate adjustments to customs data cannot be confirmed. Export data mostly are obtained directly from exporters and considered more accurate. It is noteworthy that these export data differ from CSO export data. Therefore, the lack of access to customs data may reduce the accuracy of import and export estimates. There are no data sources at present for unrecorded trade.

Data on travel receipts are no longer available from the Botswana Tourism Authority (although relevant source data are still collected). Until 2002, the Botswana Tourism Authority provided survey-based estimates of average spending by visitors per day, which was multiplied by immigration data to obtain an estimate of travel credits. Data obtained in 2002 have been inflated to obtain current estimates. Other administrative data cover data on pension and insurance companies, medical and educational travel, and various aspects of government transactions. These data are generally available on request. They vary in terms of timeliness, accuracy, and appropriate classification but, overall, are considered adequate.

The ITRS is used as the main data source for some services and transfer items in the current account. The ITRS relies on reporting by all licensed banks and Western Union but not any other foreign exchange dealers. Banks and Western Union report aggregated transaction data for all transactions up to the threshold of 10,000 pula and itemized transactions above, including purpose, transactor, country, and date. The BoB compilers argue that the reliability of classification in ITRS reports is poor (banks identify the purpose of transactions in the case of receipts, without reference to the beneficiary). Furthermore, the coverage of the ITRS is poor since many relevant transactions “slip through” the system. As a result, aggregates obtained from the ITRS are regularly lower than those obtained from other sources.

Exchange bureaus are excluded from the reporting requirement because it is assumed that they will obtain their foreign exchange from commercial banks, and therefore including them

would imply double counting their transactions. However, exchange bureaus will obtain only their net cash requirements from banks, and hence only their settlements will be captured when reported by the banking system. The ITRS further omits credit card transactions. Given these multiple weaknesses, the value of data obtained from the ITRS is doubtful.

The BoB's main survey is an annual investment and international investment position survey. Also, a quarterly survey covers the same data from a smaller sample, but its results are not being published yet. The survey sample is derived from a record of transactors of the ITRS since no data from the official Business Register are used. However, a business census is being carried out now that is expected to generate improved information on formal sector enterprises. There are no established procedures for adjustments for nonresponses. The survey is conducted in a well-planned manner, with reasonable sample frames. Response rates are not entirely satisfactory (about 60 percent) but have been improving over time. There are no surveys of individuals.

In summary, data sources cover most items of the balance of payments framework, but accuracy and reliability are compromised in important parts. In particular, data from the ITRS are likely to show coverage and classification weaknesses.

Recommendation: The BoB should identify data sources for unrecorded trade, including shuttle trade and smuggling. Estimates for these items probably exist in police reports or other studies. It also should develop alternative data sources to cover those service items where the ITRS is the only source of information. The Botswana Tourism Authority again should process data from its travel surveys.

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

Trade data obtained from the CSO, data reported in surveys, and data obtained directly from companies are broadly consistent with the compilation guidelines of *BPM5*. Data obtained from the ITRS are also consistent with the definitions, scope, and classifications required for balance of payments compilation, although there are concerns about the reliability of classification by the reporting banks. Administrative sources provide reasonable approximations of the concepts.

Minor deviations occur in the following areas:

- Survey respondents sometimes are not able to provide market values and instead report net asset values (affecting mostly data on foreign direct investment); the BoB needs to ensure that these valuations are properly applied.
- ITRS data, besides raising general concerns about coverage and classification, report on a cash rather than an accrual basis.
- Administrative data sources, such as the Department of Civil Aviation, are not always able to apply the residency criterion applicable to balance of payments compilation (especially in the case of individuals), while other reporting agencies (e.g., the Ministry of Education) report data of more limited scope than required by balance of payments compilers.
- Data obtained from the regulator of pension and insurance companies include the foreign portfolio assets of these companies but not their transactions.
- Income data relating to government are reported on a cash, not an accrual, basis.
- Public debt data do not apply sectoral classification criteria according to *BPM5*, reporting some government-guaranteed debt of the corporate sector.

In general, compilers are aware of differences between source data definitions and those required for balance of payments compilation. They frequently review source data to ensure that appropriate definitions are used, although they do not run pilot tests. Compilers further try to improve source data where possible and make necessary adjustments as far as possible.

Recommendation: Compilers should continue to investigate whether appropriate definitions and classifications are applied to source data. In the case of administrative and survey data, closer cooperation with the reporting entities would ensure improving data accuracy. The use of data obtained from the ITRS should be reduced further as far as new data sources allow (in particular, for services).

3.1.3 Source data are timely.

In recent years, the substantial delay in obtaining trade data from the CSO was the main obstacle to improved timeliness of compilation. At one point, trade data became available only 18 months after the reference period. This now has improved and monthly data are typically available within a month after the end of the reporting period. The CSO claims, and BoB compilers believe, that this improvement will be permanent.

Data on transactions by government, including transactions in government debt and income as well as those relating to the Southern African Customs Union (SACU), are obtained from the MFDP. Recently, these data were available with a time lag of six to nine months, but this has improved now to one to two months. Other administrative data (i.e., from ministries other than MFDP) often are received only when requested and typically with substantial delays.

Data obtained from the BoB investment survey are available around September each year, i.e., nine months after the reporting period. This delay is due mostly to the slow response from private sector data reporters. Data from the quarterly survey become available after only two to three months, owing to the smaller sample of companies.

Recommendation: Cooperation among the MFDP, CSO, and BoB should be improved to ensure timely compilation and exchange of data. The BoB should continue to work toward improved survey response rates, including more timely returns by survey 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.

There are no formal methods for assessing source data. Owing to the small size of the economy and the fact that most companies, as well as larger government transactions, are known to compilers, informal plausibility checks are reasonably effective. Unusual data, if identified, are often investigated. However, such checks and investigations are normally carried out using intermediate results rather than source data when managers review data. Compilers and their managers are aware that data obtained from the ITRS are weak in coverage and accuracy of classification.

Data obtained from the investment survey are used for compiling of balance of payments statistics and the international investment position. Transactions data are reconciled against reported stock positions and valuation and other changes. However, there is no information about sampling and nonsampling errors.

Revisions of data are not used to assess data sources. Revisions are typically caused by data becoming available after preliminary data have been released. Therefore, revisions could be used to assess the reliability of preliminary data.

Recommendation: The BOB should carry out more formal source data assessments. These should include, as a priority, a periodic review of sampling errors of the investment survey and a formal review of the accuracy of data obtained from administrative sources.

3.3 *Statistical techniques*

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

Computerized data entry and processing, as well as data checks, are employed to minimize human error in data entry, coding, editing, and tabulation. The two computer programs used in compilation, Cheetah and Access, are set up to provide checks on data entry and processing.

Adjustments to unit records are made only after the reporting unit receives data queries or when clearly warranted on the basis of sound information. Ancillary information is used in an informal manner, i.e., the knowledge of the compilers about economic events and developments is used to query source and intermediate data. Secondary data, where available, are used for data checks. Ancillary data are not used presently to derive estimates for missing data.

Imputation and adjustments for nonresponse are limited. No standard procedures are in place for missing observations. In the case of missing survey responses, it is assumed that no transactions took place and stocks remained constant. No adjustments for undercoverage are made, and no grossing-up factors are used. Benchmark and supplementary information is used appropriately, although important benchmarks are now outdated. Uncoded ITRS transactions cannot be allocated. Some discrepancies between quarterly and annual data have not been reconciled. However, quarterly data are not being published.

Recommendation: The BOB should develop standard techniques for estimating missing data (e.g., unrecorded trade) and accounting for missing observation and sample errors. Further, the discrepancies between annual and quarterly data should be investigated and the results used for improving estimation and compilation procedures.

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

The BoB receives trade data from the CSO at c.i.f. values. These data are adjusted using a constant factor, assuming that 8.5 percent of the c.i.f. value of goods constitutes the costs of freight and 6.26 percent the costs of insurance services. This f.o.b./c.i.f. adjustment ratio was developed in the early 1990s, and there is no institutional memory on how it was derived.

The ratio does not seem plausible since the majority of imports originate in South Africa. The transportation part of the f.o.b./c.i.f. adjustment refers to the costs of transportation between the exporting and the importing country and not to transportation within either of them. Similarly, the insurance part refers to insurance while the good is in transit between the two

countries, but not while it is being transported within either of them. In the case of the two neighboring countries, the f.o.b. value therefore should equal the c.i.f. value.

Some imports are of course obtained from countries that are not neighbors to Botswana. On balance, however, it seems likely that the adjustment ratio was derived using inappropriate definitions, perhaps including transport costs that should be part of the f.o.b. value (i.e., transport to the border in the exporting country). The impact of a revised adjustment ratio on the trade balance could be substantial.

Access to customs data on importers' valuation of goods, transportation, and insurance would not necessarily solve this problem. A Botswana importer may be billed for (and would report to customs) freight and insurance for moving the goods from the South African manufacturer to a Botswana warehouse. However, the portion attributable to transportation and insurance within South Africa should be part of the f.o.b. value, while the portion attributable to transportation and insurance within Botswana should be excluded even from the c.i.f. value (although it constitutes a debit under transportation services if provided by a nonresident). In principle, the difference between insurance premium and services would require a further adjustment. Therefore, the data captured by the customs database, relying on reporting by importers, may not provide valuation of goods and transport and insurance services that are compatible with f.o.b. and c.i.f. definitions. For imports from countries sharing no borders with Botswana, customs data may provide a better, although not a perfect, valuation.

A model was in use to estimate travel credits on the basis of immigration data (numbers and average stay of visitors) and survey benchmark data on average per day spending in Botswana. The Botswana Tourism Authority has stopped processing these data, which were last available for 2002. As an emergency measure, the BoB inflated the 2002 figures using the GDP growth rate as a proxy. A more credible estimation method is required if the Department of Tourism cannot provide survey data obtained from visitors.

Partner country data are not regularly used. South Africa, the most important bilateral partner, in several instances has not been able to provide appropriate data. Recently, in the context of the African Growth and Opportunity Act (AGOA) of the U.S., which provides trade privileges to African economies, the BoB compilers analyzed bilateral trade data obtained from the U.S. authorities. They sought to reconcile import data from the U.S. with their own export figures. Large discrepancies were discovered that could be explained largely by the different methods of identifying partner countries.

No estimates are made for unrecorded trade. No adjustments for seasonality are required since only annual data are disseminated. However, the quarterly compilation carried out for testing purposes at this stage does not employ adjustments for seasonality.

Procedures for estimating transactions from stock data are not adequate since they do not make allowances for valuation and other changes, although adequate techniques are available. This affects mainly portfolio assets of the resident private sector.

Recommendation: The BoB regularly should review the benchmarks, particularly for valuation adjustments to imports. Estimates for unrecorded trade should be developed. Alternative sources for travel data should be identified as a matter of urgency; these could include data reported by tourist establishments such as bookings and turnover of travel agencies, lodges, and hotels. Standard statistical techniques should be used to derive estimates for transactions and valuation and other changes from stock data where necessary, unless transactions data can be obtained.

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 cross-checked with related datasets as well as other data sources. However, for some data items, no alternative dataset exists, and validations cannot be conducted easily. Information on high-value transactions comes to the attention of the BoB management through news media or regulatory sources. This information is regularly used to verify intermediate results.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Related data series are checked against each other. For example, financial account data are checked against stock data. Time series are reviewed, and unusual developments are investigated. Related data, including data relating to the domestic economy, are used to identify and address discrepancies and to verify the plausibility of estimates.

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

Errors and omissions are monitored in size and direction to detect any pattern. Errors and omissions are used also as an indicator helping to flag missing and overstated transactions.

No reconciliation of bilateral data with major trading partners can be made regularly because of the lack of appropriate data from partner countries. Because of the small size of the Botswana economy, bilateral data rarely are identified separately by other, larger countries.

However, in the past, reconciliation of bilateral data with major partners found that differences exist in concepts and compilation methods used by each country, such as

valuation methods. Reconciliation efforts also have resulted in the identification of compilation errors in Botswana and partner countries.

3.5 Revision studies

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

The revision cycle is determined by the availability of source data. All balance of payments data are revised annually around September, when all administrative data and survey results become available.

No formal or systematic revision studies are undertaken, but when revisions are made they are informally reviewed. The results of such reviews are not documented formally, and no systematic information is available on the sources of errors, omissions, and fluctuations in data. However, compilers noted that preliminary data on reinvested earnings had been revised up for some time, and this year the preliminary estimate was adjusted to account for the expected revision.

Recommendation: The BoB should formalize its revision studies by systematically reviewing and analyzing revisions and documenting the results on a regular basis.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

Balance of payments dissemination follows GDDS recommendations. Data are compiled on an annual basis and disseminated in the *Annual Report* and on the website. Data also are published in the monthly *BFS*.

Quarterly compilation was started in 2006 after a long preparation period. These data are not disseminated. The BoB states the intention to publish these data as soon as consistency problems have been addressed and sufficient experience with regular quarterly compilation exists.

4.1.2 Timeliness follows dissemination standards.

Initial balance of payments statistics (based on estimates using source data covering only part of the reporting period) are disseminated in the *Annual Economic Report* as part of the

budget speech given in early February, covering the preceding calendar year. Preliminary data, based on source data covering the whole year but still containing estimates and some gaps in detailed presentations, are subsequently published in the *BFS* in March and the *Annual Report* that becomes available during the second quarter. The website is updated accordingly, showing the most recent *BFS* tables, therefore satisfying applicable standards. Final data become available around September.

Until recently, source data on imports were not available in a timely manner, delaying the release of revised (final) data.

4.2 Consistency

4.2.1 *Statistics are consistent within the dataset.*

Concepts, definitions, and classifications for producing monthly, quarterly, and annual statistics are the same. Annual statistics are, in principle, the sum of quarterly statistics, although discrepancies exist in practice, owing to varying data sources and adjustment methods. Annual data are allocated to quarterly data using appropriate methods, except that seasonality is not accounted for. Only annual data are being published, and these data are internally consistent, thereby meeting GDDS criteria.

Over the long run, the net errors and omissions item has been at an acceptable level (well below +/- 5 percent of trade volume) and without a discernable pattern.

Financial account data are reconciled with changes in the international investment position. Information outlining this reconciliation, i.e., a table detailing transactions and changes due to exchange rates, prices, and other changes, is not disseminated.

Recommendation: The BoB should publish a table detailing transactions, changes due to exchange rates, prices, and other changes, demonstrating the reconciliation between the financial account and the international investment position.

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

For most items, consistent time series are available for an adequate period (10 years are presented in the *BFS* tables). When changes in source data, methodology, or techniques are introduced, historical series are reconstructed as far back as reasonably possible. These revisions are carried out as soon as the work load permits, but delays do sometimes occur.

Methodological notes are included in the *BFS* and the *Annual Report* and posted on the website. Main breaks and discontinuities in the balance of payments component time series are explained in these notes when changes are made but will not be repeated in subsequent

data releases (e.g., subsequent editions of the *BFS* showing the same data) even when the breaks and discontinuities remain.

Unusual changes in economic trends are explained in the commentary included in all forms of release of balance of payments data (*BFS*, *Annual Report*, Internet website).

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

Balance of payments data on the imports of goods are obtained from the CSO, then adjusted to f.o.b. values. Merchandise trade statistics report imports in c.i.f. values, using gross SACU receipts for valuation adjustments. These different (and, in both cases, inadequate) methods cause discrepancies between merchandise trade statistics and national accounts data on one hand and balance of payments data on the other. Export data obtained from exporters are used for balance of payments compilation. These show a discrepancy with merchandise trade statistics, which are based on customs reports.

Balance of payments statistics are largely consistent with national accounts statistics, with the exception of the valuation of imports and the classification of some flows relating to the SACU arrangement. There are no significant discrepancies with other datasets.

Recommendation: The CSO should adopt appropriate valuation methods for imports and appropriate classification for SACU-related flows. If any discrepancies remain, including on exports, these should be investigated and reconciled.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

There is no revision schedule, but revisions follow a reasonably stable cycle from year to year, determined by data availability. Neither the revision cycle nor the reasons underlying the cycle are explained publicly. During periods when source data were delayed, revisions were delayed without any explanation to the public. This situation was particularly serious a few years ago when trade data obtained from the CSO, lagging 18 months, delayed the final revision of balance of payments data by almost a year beyond the normal revision cycle.

Recommendation: The BoB should publish a revision schedule that explains the timing and its reasons for revisions. It should explain any delays in revisions, unscheduled revisions, and its reasons.

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

Preliminary and revised data are clearly identified in the relevant tables. However, entire datasets are marked as preliminary or revised; it is not possible to identify specific items that were revised.

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

Reviews or studies of revisions are not made public. Although the BoB does not carry out formal revision studies, compilers have information about the size and direction of revisions. They could then collect information about revision history and experience that could guide the public in better understanding preliminary data and revisions.

Recommendation: The BoB should publish relevant information about revisions, including the size and direction of, the reasons for, and past experience with 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).*

The presentation of balance of payments data largely satisfies users' needs. Balance of payments statistics are published according to the standard components of the *BPM5*, with sufficient time-series data. Numerous additional series are published to meet users' needs, and datasets are published with various levels of detail (e.g., on trade and financial account items).

Balance of payments statistics are published in a clear and accessible manner, both in printed and Internet form. All data available in printed form also can be downloaded from the BoB website. Commentaries on current-period developments are available in the standard data publications (*BFS* and *Annual Report*), as well as on the website.

5.1.2 *Dissemination media and format are adequate.*

Preliminary data are first released through the budget speech and are then distributed, in printed form, through the *Annual Report* (available in the second quarter, covering data for the preceding calendar year), the *BFS*, and the BoB website. Revised (final) data are published around September.

The *BFS* is widely available throughout Botswana; the website facilitates good data access since data can be downloaded. An initial release as part of the budget speech is made available in written form when it is delivered and contains tabulated balance of payments data, clearly identified as compiled by the BoB. This constitutes an unusual form of data release and could be interpreted as contrasting with the role of the BoB as the primary disseminating institution. Further, since the budget speech preparation requires that data be made available to the MFDP within two weeks after the reporting period, this form of release puts undue pressure on compiling staff.

Recommendation: The BoB should consider publishing data referred to in the budget speech on its website.

5.1.3 Statistics are released on a preannounced schedule.

The BOB does not provide a schedule for data release. The date of the budget speech is publicly known, while the date of release of revised (final) data is not predetermined.

Recommendation: The BoB should publish a schedule providing details of data release for preliminary and final data.

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

Balance of payments data are made available to some BoB and government data users prior to its release. All other data users, including all nongovernment data users, gain access to data at the same time.

5.1.5 Statistics not routinely disseminated are made available upon request.

In addition to the balance of payments statistics and related data routinely published, some further series are made available upon request. Unpublished (but nonconfidential) specialized detail and analytical tables (e.g., on import cover) can be provided. Users are informed of the relevant contact information (name of contact person, telephone number, e-mail address) in the standard dissemination publications.

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.

Balance of payments statistics (GDDS) metadata provide data users with adequate information about data sources and methods, pointing out limitations and deviations from

international guidelines. Metadata are updated regularly (the current version was updated in May 2006).

However, metadata are not available from a domestic source. The BoB staff will refer data users who inquire about it to the IMF website where GDDS metadata are published. Data publications of the BoB do not refer users to the GDDS metadata.

Supplementary information on sources and methods is available from notes on methodological changes in the *BFS* and the *Annual Report* and occasional articles in the *Research Bulletin* and *Annual Report*.

Recommendation: The BoB should inform data users about the existence of metadata. The BFS and Annual Report should mention GDDS metadata and provide information about accessing it, while the BoB website should provide a link. A printed version of the metadata should be made available to users of the GFS who do not have Internet access.

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

GDDS metadata are the only formal source of information about compilation sources and methods. Further information, including information aimed at different audiences, is available from the BoB on an individual basis.

Recommendation: The BoB should inform the public that further information and explanations about sources and methods are available from compilers.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

The BoB publishes the names and contact information for relevant staff (who can be contacted by telephone and e-mail) in the *BFS* and on its website. The BoB commits to responding to all requests “promptly.” The RD’s strategic planning exercise identified help to data users as a key performance indicator. SISU will therefore be assessed internally on the timeliness and usefulness of its responses to queries.

Recommendation: The BoB could further enhance its support to data users by committing to a specific timeframe in which queries will receive a response.

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

The BoB website and all its publications provide information on publications, the ordering process, contact details, and costs. The *BFS* is free to users in Botswana and is widely distributed.

Table 6. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics
(Compiling Agency: Bank of Botswana)

Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment			X			The legal mandate for balance of payments compilations is based on an informal agreement. Coordination between agencies is not always effective.
0.2 Resources			X			Resources are only marginally sufficient. Allocation could be improved on the divisional level.
0.3 Relevance		X				
0.4 Other quality management			X			Timeliness and periodicity are not sufficiently emphasized in the statistical program.
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				Internal access to data is not fully identified.
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording			X			Transactions derived from stocks are calculated without taking account of valuation and other changes. Some data are recorded on a cash basis.
3. Accuracy and reliability						
3.1 Source data			X			There are inconsistencies in the ITRS, some data definitions diverge from <i>BPM5</i> requirements, administrative and survey data are not timely, and travel source data are unavailable.
3.2 Assessment of source data			X			No regular, consistent assessment is carried out at data entry; review only after first stage of aggregation.
3.3 Statistical techniques				X		There are inadequate adjustments for missing data, import values, and flows derived from stocks as well as an inadequate estimation of travel credits.
3.4 Assessment and validation of intermediate data and statistical outputs		X				

Table 6. Botswana: Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics
(Compiling Agency: Bank of Botswana)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Compiles with SDDS Criteria						
Element	NA	Assessment			Comments	
		O	LO	LNO		
3.5 Revision studies			X			Revision studies are not carried out in a systematic fashion. Compilers informally review revisions. They have identified and addressed patterns in revisions.
4. Serviceability						
4.1 Periodicity and timeliness		X	X			Reconciliation data (with IIP) are not published. There are inconsistencies in import and export data and SACU flows compared with trade and national accounts statistics.
4.2 Consistency						There is no revision schedule and no information about revisions is published.
4.3 Revision policy and practice				X		
5. Accessibility						
5.1 Data accessibility			X			Compiling agency is not the first to release data (budget speech), there is a stable release cycle but no schedule, and government users have prior access to data.
5.2 Metadata accessibility			X			GDDS metadata are the only source, and they are only available on the DSBB website.
5.3 Assistance to users				X		

**Appendix I. Data Quality Assessment Framework—Generic Framework
(July 2003 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 to be 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 the quality of the statistical program.</p> <p>0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.</p>
<p>1. Assurances of integrity</p> <p><i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p>1.1 Professionalism—<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 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</p> <p><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</p> <p><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 country-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, 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 nonsampling 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 are carried out routinely 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 follow a regular and transparent schedule. 4.3.2 Preliminary and/or revised 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 for each subject field are publicized. 5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.</p>

Appendix II. Summary of the General Data Dissemination System (GDDS)

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: Guide to the GDDS, March 2002: <http://dsbb.imf.org>