

**Ecuador: Report on Observance of Standards and Codes—Data Module;
Response by the Authorities; and Detailed Assessment Using Data Quality
Assessment Framework**

This Report on the Observance of Standards and Codes on Data Module for the **Ecuador** 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 5, 2003**. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **Ecuador** or the Executive Board of the IMF.

The response by the Authorities on this report, and the Detailed Assessment Using the Data Quality Assessment Framework (DQAF) are also included.

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

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March 5, 2003

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Acronyms

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
BCE	Central Bank of Ecuador
BIS	Bank for International Settlement
<i>BPM4</i>	<i>Balance of Payments Manual, Fourth Edition</i>
<i>BPM5</i>	<i>Balance of Payments Manual, Fifth Edition</i>
DSBB	Dissemination Standards Bulletin Board
ENIGHU	National Survey of Urban Household Income and Expenditure
<i>GFS</i>	<i>Government Finance Statistics</i>
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
GDP	Gross Domestic Product
IMF	International Monetary Fund
INEC	National Institute of Statistics and Censuses (<i>Instituto Nacional de Estadística y Censos</i>)
ISIC	International Standard Industrial Classification of All Economic Activities
OECD	Organization for Economic Cooperation and Development
U-CPI	Urban Area Consumer Price Index
PPI	Producer Price Index
ROSC	Report on the Observance of Standards and Codes
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MEF	Ministry of Economy and Finance
SDDS	Special Data Dissemination Standard
SB	Superintendency of Banks
SC	Superintendency of Companies

EXECUTIVE SUMMARY

This data module of the Report on the Observance of Standards and Codes (ROSC) contains (1) a summary assessment of dissemination practices relative to the IMF's Special Data Dissemination Standard (SDDS); (2) a summary assessment of data quality for national accounts, consumer price, producer price, balance of payments, government finance, and monetary statistics, based on the Data Quality Assessment Framework (DQAF) prepared by the IMF Statistics Department; and (3) recommendations for improvement.

Assessed datasets are compiled by the National Institute of Statistics and Censuses (INEC), the Central Bank of Ecuador (BCE) and the Ministry of Economy and Finance (MEF). This report was prepared by a mission that visited Quito during April 11–25, 2002.

The findings are:

- Ecuador is in observance of SDDS specifications on coverage, periodicity, timeliness, and dissemination of advance release calendars for data subject to the SDDS.
- The overall quality of most of the macroeconomic statistics is good, but some (particularly government finance statistics) are not disseminated in sufficient detail to permit comprehensive macroeconomic analysis and timely monitoring of short-term conditions. National accounts series denominated in U.S. dollars (the new legal tender) have not been compiled yet, but plans for improvement have recently been prepared. There are deficiencies in source data and in methods for estimating certain balance of payments transactions. The sectorization of bank accounts also poses some problems.
- The BCE is in charge of preparing and disseminating most macroeconomic aggregates and maintains a policy of open dissemination, making a variety of data available to the public in print and through its website. The usefulness of these data would be greater with improved coverage, availability of metadata (information on methodology, statistical techniques, and data sources), and data presentation.
- Further improvement in the overall quality of macroeconomic statistics and in compilation efficiency will require attaching higher priority to national statistical policy, modernizing the Statistics Law, and formalizing cooperation between the BCE and the MEF for the compilation of the fiscal statistics.

The main findings regarding DQAF specifications are:

Prerequisites of quality: While an extensive legal framework supports statistical activity, assignment of similar functions to different entities creates the risk of duplication. The Statistics Law is outdated, somewhat vague, and some of its provisions are not observed. The risk of overlap and the vagueness in the legal framework have been overcome by good inter-agency collaboration. Agencies are aware of the importance of quality and have sufficient computer resources, but some are in need of modest increases in staff and training.

Integrity: Agencies demonstrate professionalism and their staff are provided with appropriate ethical guidelines. Selection of data sources and methods is governed exclusively by statistical considerations. Statistical policies and practices are generally transparent.

Methodological soundness: While broadly in line with international guidelines, there are shortcomings regarding the scope, classification, sectorization, and/or basis of recording, mainly in the case of the government finance statistics.

Accuracy and reliability: The availability of fiscal source data is inadequate and there are also deficiencies in source data for compiling the national accounts and the balance of payments. Revision studies are not prepared on a regular basis.

Serviceability: The periodicity and timeliness of the statistics subject to the SDDS are good. Intersectoral reconciliation of annual statistics is adequate in most cases. Revision studies are not disseminated and formal consultations with users are not conducted regularly.

Accessibility: The statistics subject to the SDDS are disseminated simultaneously to all users following an advance release calendar. There is a need to provide more comprehensive methodological notes to the public. Most compilers provide adequate assistance to users.

Recommendations are presented in the final section of this report.

I. INTRODUCTION

1. Assessments in this data module of the Report on the Observance of Standards and Codes (ROSC) are based on information provided by the authorities, official data available to the public, and user views.¹ The main components of the report are:

- a summary assessment of dissemination practices of macroeconomic statistics relative to the IMF's Special Data Dissemination Standard (SDDS);
- a summary assessment of the quality of key macroeconomic statistics, based on the Data Quality Assessment Framework (DQAF) prepared by the IMF Statistics Department; and,
- recommendations for improving the quality of these data.

2. To enhance the basis for assessment, the mission elicited the views of users of macroeconomic statistics. With the assistance of the Central Bank of Ecuador (BCE), the mission conducted a survey and met with selected users. Most users were generally satisfied with the quality of the official statistics, citing in particular the external debt, balance of payments, and price statistics. Some expressed concern about insufficient detail available on

¹ The mission comprised: J.R. Rosales (Head), Segismundo Fassler, Teresa Villacrés, Gillmore Hoefdraad (all STA), Pablo Mandler and Ricardo Puig (experts), and Carmen Díaz Zelaya (STA—Administrative Assistant).

central government operations. Most were not familiar with advance release calendars and expressed dissatisfaction with the lack of information on data revisions.

II. ASSESSMENT OF DATA DISSEMINATION PRACTICES AND THE SDDS

A. Overview of the SDDS

3. This assessment is based on the SDDS, a “best practices” model applied to key statistics in four macroeconomic sectors (real, fiscal, financial, and external). The SDDS is a dissemination standard (rather than a data quality standard) that seeks to promote disclosure of information, including of that needed to assess the suitability of data for a particular purpose. For each of the four dimensions of dissemination (data, access, integrity, and quality), the SDDS prescribes two to four practices that can be monitored (Annex I).

B. Current Dissemination Practices

4. Ecuador meets SDDS specifications for the coverage, periodicity, and timeliness of selected data and the use of advance release calendars. Ecuador subscribed to the SDDS on March 27, 1998 and has published metadata on the Dissemination Standards Bulletin Board (DSBB) since September 14, 1998. The National Summary Data Page (NSDP) was linked electronically to the DSBB in November 2000 and the Data Template on International Reserves and Foreign Currency Liquidity has been disseminated since July 2001.

5. The institutions responsible for the compilation and dissemination of SDDS data are the BCE, the National Institute of Statistics and Censuses (INEC), and the Ministry of Economy and Finance (MEF). The BCE is required to compile and disseminate data on the national accounts, production index, public sector operations, central government operations, central government domestic debt, analytical accounts of the banking sector², analytical accounts of the central bank³, interest rates, balance of payments, international reserves and the data template on international reserves and foreign currency liquidity, merchandise trade, and exchange rates. INEC is responsible for the compilation and dissemination of data on price indices and population. The MEF compiles fiscal data, including on public debt. The BCE re-disseminates share price indices from the stock market.

6. Ecuador provides access to these data through various publications and websites:

- The BCE website (<http://www.bce.fin.ec>)
- The MEF website <http://www.minfinanzas.ec-gov.net>
- The INEC website <http://www.inec.gov.ec>

² The banking sector comprises those institutions covered in the Depository Corporations Survey (DCS), as recommended in the new edition of the *Manual on Monetary and Financial Statistics, 2000 (MFSM 2000)*.

³ The analytical accounts of the central bank make up the Central Bank Survey (*MFSM 2000*).

Data Dimension: Coverage, Periodicity, and Timeliness

7. Table 1 summarizes the coverage, periodicity, and timeliness of macroeconomic data and provides a comparison with SDDS requirements.

Access Dimension

8. Each January, the BCE disseminates a calendar with the exact dates of publication of the data via its website (<http://www.bce.fin.ec>). The advance release calendars giving the exact release dates of the SDDS categories are posted on the DSBB at the IMF's website <http://dsbb.imf.org>, at least one quarter in advance. The data are released simultaneously to all interested parties, generally via the BCE website, and on the Ecuador NSDP (http://www.bce.fin.ec/cgi-bin/dsbb/dsbb_lee.pl).

Integrity Dimension

9. As required under the SDDS, the public has access to information (in Spanish) on the terms and conditions (e.g., laws, regulations, and decrees) governing data collection, compilation, and dissemination, including about the confidentiality of collected data.

10. Procedures for internal access to data before release are posted on the DSBB. The compilation and dissemination of macroeconomic statistics coordinated by the BCE is governed by the Organic Statutes of the BCE and the statistical code of conduct.

Quality Dimension

11. The information provided to the IMF on methodology for 12 data categories are published on the DSBB and can be found at <http://dsbb.imf.org/country/ecucats.htm>. Some additional methodological information is also disseminated. For example, the BCE balance of payments publication *La balanza de pagos de Ecuador: Metodología de elaboración y series 1993–2000* contains methodological notes. Certain agencies also disseminate component details and additional data series that permit crosschecks and checks of reasonableness for data categories prescribed by the SDDS.

Monitoring of Data and Access Dimensions

12. In July 2000, the IMF began monitoring performance of countries subscribing to the SDDS. Monitoring is conducted by checking data against publication dates in advance release calendars and in the metadata, to verify whether data are released in accordance with the timetable and correspond to the metadata posted on the DSBB. During the period July 2000 to early 2002, Ecuador's dissemination practices were in observance of the SDDS, except for the Data Template on International Reserves and Foreign Currency Liquidity, which was first published in July 2001.

Table 1. Ecuador: Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Data Compared to the SDDS ^{1/}

SDDS Data Category	Coverage (meets SDDS requirements)	Periodicity		Timeliness		Comments
		SDDS	Ecuador	SDDS	Ecuador	
Real Sector						
National accounts: GDP at current prices	Yes	Q	Q	Q	Q	Quarterly data at current and constant prices (1975) are produced. GDP data at constant prices are broken down by productive sector and main expenditure category, while data at current prices are broken down by main expenditure category.
GDP at constant prices	Yes	Q	Q	Q	Q	
Production Index/Indices	Yes	M	M	6W	6W	A Laspeyres index (1993=100).
Employment	Yes	Q	M	Q	M	Periodicity and timeliness exceed SDDS requirements. Data are based on a monthly survey.
Unemployment	Yes	Q	M	Q	M	
Wages/earnings	Yes	Q	M	Q	M	
Consumer prices	Yes	M	M	M	Last business day of the reference month.	A Laspeyres index (Sep 1994-Aug 1995=100) covering 12 cities.
Producer or wholesale prices	Yes	M	M	M	M	Producer price index (1995=100)
Fiscal Sector						
General government operations	Yes	A	A	2Q	180 days	Expenditure is recorded on an accrual basis and presented in consolidated figures for the nonfinancial public sector.
Central government operations	Yes	M	M	M	M	Data on revenue and expenditure are disseminated on a cash basis and data on financing on an accrual basis.
Central government debt	Yes	Q	Q	Q	Q	All domestic liabilities of the government are long-term. Nonbank debt is not disseminated because it represents less than 5 percent of total debt.
Financial Sector						
Analytical accounts of the banking sector	Yes	M	M	M	M	

Table 1. Ecuador: Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Data Compared to the SDDS ^{1/}

SDDS Data Category	Coverage (meets SDDS requirements)	Periodicity		Timeliness		Comments
		SDDS	Ecuador	SDDS	Ecuador	
Analytical accounts of the central bank	Yes	M (W encouraged)	W	2W (W encouraged)	Next business day	Periodicity and timeliness exceed SDDS requirements.
Interest rates	Yes	D	D W	2/	...	Periodicity and timeliness are weekly for the prime rate (policy rate) and for lending and deposit rates, and daily for the interbank rate.
Stock market	Yes	D	D	2/	2 business days	The Central Bank of Ecuador reissues the indices.
External Sector						
Balance of payments	Yes	Q	Q	Q	70 days	The data are compiled in accordance with the <i>BPM5</i> .
International reserves	Yes	M (W encouraged)	M	W	W	
Reserve template	Yes	M	M	M	M	
Merchandise trade	Yes	M	M	8W (4-6W encouraged)	1 M and 3 business days	Timeliness exceeds SDDS requirements.
International investment position	No	A (Q encouraged)	...	2Q (Q encouraged)	...	No data disseminated as yet. The transition plan expires on June 30, 2002.
Exchange rates	Yes	D	D	2/	D	The dollarization laws provide that the Central Bank will accept sucres at a rate of S\$25,000.00 to US\$1.
Addendum: population	Yes	A	A	...	28 M	

^{1/} Periodicity and timeliness: (D) daily; (W) weekly or with a lag of no more than one week from the reference date or the closing of the reference week; (M) monthly or with a lag of no more than one month; (Q) quarterly or with a lag of no more than one quarter; (A) annually; and (...) not applicable.

^{2/} Given that the data are broadly disseminated by private means, the timeliness with which official data are published is not so important. Although dissemination is recommended via recorded telephone messages or by fax, it may form part of other dissemination mechanisms (preferably, high frequency).

III. SUMMARY DATA QUALITY ASSESSMENT

Prerequisites of Quality

13. The legal framework provides broad support for the compilation of macroeconomic statistics. Current laws and regulations assign compilation responsibilities to the BCE, MEF, and INEC. The macroeconomic statistics subject to the SDDS are compiled and disseminated by the BCE, except for price indices, which are prepared by INEC. In preparing

macroeconomic aggregates, the BCE relies on data from the MEF, INEC, the Superintendency of Banks (SB), and the Superintendency of Companies (SC).

14. However, the legal framework is complex and recent changes have increased the risk of overlap. After the 1998 constitutional reform, the laws and/or statutes of the BCE and MEF were amended, partly to ensure consistency with the dollarization policy adopted in 2000. Under new statutes, the MEF is to compile national accounts, which if implemented, could lead to duplication with the BCE. At present, both the BCE and MEF compile external public debt statistics. The planned introduction of the Organic Law on Fiscal Accountability, Stability, and Transparency would reform the framework for fiscal management and could bring changes to the compilation and dissemination of fiscal statistics.⁴

15. Uncertainty arising from the complex legal framework has been overcome by good interinstitutional collaboration. This collaboration is partly a result of laws placing the MEF and the SB on the Board of the BCE, and the General Manager of the BCE on the Banking Board, the governing body of the SB. Interinstitutional collaboration is also supported by cooperation agreements between the BCE and INEC, the SB, and the SC.

16. Such collaboration is key to macroeconomic data production, including because the National Statistical System (SEN) envisaged in the Statistical Law does not work. Under the law, the Statistics and Censuses Council (CONEC) is to be the governing body of the SEN. CONEC, however, has been unmanageable owing in part to a plethora of members, including the director of mobilization of the joint chiefs of staff, delegates from each ministry, and the chairmanship of the Vice-President of the Republic. Another major deficiency is the apparent hierarchical conflict between the lead agency in SEN, INEC (which reports to the MEF), and financially stronger and higher ranking agencies, such as MEF and BCE. Contrary to the legal requirement, the BCE and MEF do not submit to INEC their statistical research projects, methodologies, budgetary estimates, and work timetables, for the drafting of an annual National Statistics Program, which has not been prepared in many years.

17. One positive aspect of the Statistics Law is that it mandates respondents to provide information requested by compilation agencies, members of SEN. This requirement is particularly important as it supports data collection on prices, national accounts, and balance of payments, for which there is no other legal basis. Unfortunately, penalties for noncompliance under the Statistics Law (US\$0.01-US\$0.09) are unlikely to be effective.

18. By contrast, data collection for compiling fiscal, monetary, and banking statistics has stronger legal underpinnings. This support is based in budget and financial legislation, which prescribe severe penalties for noncompliance. However, statistical agencies rarely invoke these laws because they try to encourage voluntary reporting, providing technical assistance to reporting entities. Close contact, particularly between the BCE and respondents, is aimed at preempting and resolving noncompliance. In addition, respondents are assured of

⁴ Approved by Congress on May 13, 2002.

confidentiality and the exclusive use of data for statistical purposes. Civil servants disclosing confidential information are subject to penalties established by law.

19. Although outdated and with certain shortcomings, the legal framework of **INEC** is broadly adequate and coordination with other agencies is good. The law confers broad authority and the power to operate as the official center for statistical information. INEC is to coordinate and supervise the work programs of other SEN agencies. In practice, work on real sector statistics is limited to compilation of consumer and producer price indices and annual surveys of nonagricultural activities. The law stipulates that the Director of INEC is to be appointed by the President of the Republic from a slate submitted by the President of CONEC. However, as CONEC is not functional, the Minister of Economy and Finance proposes the slate to the Vice President, who then presents it to the President. In this context, recent frequent changes in leadership of INEC are a matter of concern, particularly because of potential erosion in its credibility. Cooperation between INEC and the BCE through agreements includes a financial dimension. These agreements were initiated many years ago and have enhanced the financial position of INEC, while ensuring the quality of related work, including through quarterly technical audits by the BCE.

20. **INEC** manages efficiently its adequate human resources and supervises the quality of its statistical product, but is under-equipped to compile the producer price index (PPI). The academic qualifications of the staff are good and they attend professional training courses abroad and technical meetings to keep abreast of developments. Work programs and processes as well as the efficient use of available information technology are well managed. Funds from an Inter-American Development Bank (IDB) loan will help finance a new household income and expenditure survey to be launched in the second half of 2002, which will help update the urban CPI. INEC also hosts meetings to discuss and assess its methodology (the last one was held on March 8, 2002). Also, to build public confidence in the urban CPI, INEC is working toward ISO 9000 certification. Since 1994, INEC has not conducted user surveys to elicit opinion on the reliability of its products, but it frequently holds meetings with the press and universities to discuss quality aspects of price indices.

21. The legal framework of the **BCE** gives rise to some uncertainty, but collaboration with most other agencies is adequate. The Organic Law of the BCE requires compilation and dissemination of monetary, fiscal, external sector, and real sector statistics. Consistent with budgetary and financial legislation, however, the law stipulates that the BCE is to compile “summary” statistics, thereby implicitly recognizing the role of other agencies in compiling basic or intermediate data. In addition, the BCE has contractually strengthened statistical cooperation with the SB and INEC. However, the BCE has no formal arrangements to guarantee timely receipt of basic statistics prepared by the MEF, which could turn problematic in the period ahead. The absence of a formal agreement on the division of statistical tasks between the BCE and the MEF also contributes to uncertainty regarding responsibility for the compilation of the national accounts.

22. The **BCE** has sufficient computer resources and has demonstrated dedication to quality, but faces some staffing constraints. Through restructuring and consolidation, the BCE recently reduced staff significantly, particularly in 1999-2000, which eroded human

capital in the statistics area. To prevent an adverse impact on statistical work (especially on the national accounts), consultants (retired personnel) have been temporarily hired to train junior technical staff, and computer resources have been substantially upgraded. The subsequent increase in statistical production with fewer staff considerably boosted productivity, but modest increases in staff and training are needed. Aware of the importance of quality, the BCE has regularly revised methodologies and data collection, processing, and dissemination. However, the BCE does not audit its statistics regularly or conduct user surveys to elicit views on quality.

23. The legal framework of the **MEF** mandates regular presentation to Congress of data on the government finances, but does not require dissemination of data to the public. Recent changes in reporting requirements set by the MEF have adversely affected the compilation of fiscal statistics. Ministerial Decision No. 182 of December 29, 2000, issued to ensure consistency with a new information system financed by the World Bank (SIGEF), streamlined the level of detail of expenditures required from reporting entities, complicating the compilation of fiscal statistics in a timely manner and with the sufficient degree of detail. Also, it is unclear whether penalties for failure to report information are applied strictly and in a timely manner. On the positive side, the MEF maintains good relations with INEC, the BCE, and other public agencies in terms of data exchange.

24. The **MEF** makes efficient use of adequate computer resources, but faces a need to train staff. Although the MEF has an adequate number of staff compiling statistics (including on public debt), modest personnel increases would allow professional development of current staff, including through training in recent methodological advances. The MEF recognizes the importance of data quality, which is being enhanced through the establishment of common accounting standards for all budgetary units, and automated data compilation and verification. However, there are no formal data quality assessment procedures.

Integrity

25. **INEC** promotes professionalism and ethical conduct, though its operations could be more transparent. Internal regulations govern key aspects of the professional careers of staff and prevent undue external influence on data content or dissemination, with orientation provided to new staff about rights and duties. Selection of data sources and methods is driven exclusively by statistical considerations, and INEC is authorized to comment on relevant media reports, including on errors of interpretation. Although its statistical policies and practices are generally transparent, changes in methodology are not announced in advance, and no reference to the law is provided in publications. On the positive side, INEC does not allow any national authority access to the statistics prior to release to the public.

26. The **BCE** is committed to maintaining the highest standards of professionalism, transparency, and ethical conduct. The Constitution of Ecuador establishes the administrative and technical autonomy of the BCE, and its internal rules are based on the requirements of professionalism in the hiring and promotion of staff. The selection of data sources is based exclusively on statistical considerations and staff are encouraged to work on research and the preparation of studies on relevant issues. The BCE reacts to erroneous interpretations in the

media, maintaining transparent statistical policies and practices. The BCE publicizes the terms and conditions of data compilation, does not allow any national authority to have access to the statistics prior to release, and identifies itself as the data-producing agency. On the other hand, the BCE generally gives no advance notice of major changes in methodology, statistical techniques, or source data. Staff are subject to a code of ethics.

27. The **MEF** promotes a high level of professionalism and ethical conduct, but there is insufficient emphasis placed on the need for transparency. Government finance statistics are compiled on the basis of accounting records and administrative reports, which follow a common chart of accounts and budgetary rules. Choice of data sources and methods is free from any political influence, and changes in statistical procedures are based solely on technical criteria. The MEF does not publish statistical data regularly, and its statistical bulletin on external public debt is for internal use and is distributed only to selected users. There is no policy for disseminating the terms and conditions for data compilation and the number of documents on this subject on its website is limited. Furthermore, there is no advance notice of major changes in methodology, statistical techniques, or source data. In the event of improper interpretation of fiscal data (by the press), the MEF disseminates explanatory material to facilitate correction.

Methodological Soundness

28. The new annual **national accounts** are compiled using the *System of National Accounts 1993 (1993 SNA)*; the quarterly national accounts are based on the *System of National Accounts 1968 (1968 SNA)*. Concepts, definitions, and classifications generally follow international recommendations, but there are exceptions resulting largely from lack of adequate data. The lack of series denominated in U.S. dollars, the new legal tender, is a matter of concern. The Classification of Individual Consumption by Purpose (COICOP) is not applied to household consumption, as in the *1993 SNA*; government income is recorded on a cash basis; assets related to national defense that could also be used for civilian purposes are still included in intermediate consumption of the general government; and nonprofit institutions serving households are not treated separately, but rather as part of the household sector. The new series covers almost the full set of accounts recommended by the *1993 SNA*.

29. The urban **consumer price index (U-CPI)** is based on long-established internationally accepted concepts and definitions, rather than more recent recommendations. The index measures changes in prices of a representative basket of household expenditure. The definition of household consumption expenditure is consistent with the *1968 SNA*, and a monetary concept of expenditure is used. The U-CPI uses the classification of individual consumption by purpose (COICOP), and prices collected are market purchase prices for transactions in cash during the reference period. The U-CPI covers approximately 70 percent of the urban population, excluding households in the high-income decile, small localities, and the Amazon and insular areas of the country.

30. The conceptual framework for the compilation of the **producer price index (PPI)** is consistent with internationally accepted standards and practices. Concepts and definitions are in accordance with *1993 SNA*. The index covers manufacturing and mining activities,

agriculture, and fishing. The scope of the index is national and is compiled using the International Standard Industrial Classification (ISIC Rev. 3) and the Central Product Classification (CPC). Prices collected are ex-factory and tax-exclusive.

31. The **balance of payments** is compiled and disseminated annually and quarterly. Its structure is based on the concepts, definitions, and classifications of *BPM5*. Also, transactions are recorded following the residence criteria of *BPM5*. With the exception of a major public debt operation in 2000, transactions are recorded in accordance with the principle of valuation based on market prices. Most transactions are in dollars, and when the transaction currency is not the U.S. dollar, the data are converted into dollars at the exchange rate of the day on which the transaction is recorded. The time of recording follows the accrual basis accounting principle of the *BPM5*, except in the case of interest on the external debt, which is recorded according to the due date. In general, *BPM5* guidelines are followed for recording transactions in the current and capital accounts in gross values and those of the financial account in net values, separating assets and liabilities, although reserve assets include certain liabilities. No data are collected on direct or portfolio investment by residents.

32. Compilation of the **government finance statistics** follows national concepts and definitions, which are, by and large, similar to those in the *Manual on Government Finance Statistics, 1986 (GFSM 1986)*. At present, there are no plans to migrate to the *Government Finance Statistics Manual, 2001 (GFSM 2001)*.⁵ Statistics are disseminated on the operations of the non-financial public sector (NFPS), central government (budgetary), “rest of NFPS entities”, and non-financial public enterprises (NFPEs). The coverage of “government entities” does not follow international standards, because it includes some NFPEs. Separate statistics for the consolidated central government, local governments, and the consolidated general government are not compiled.

33. The concepts of revenue, expenditure, financing, and debt follow national criteria, which are similar to those recommended in the *GFSM 1986*, but with significant differences in presentation and a less detailed breakdown. For most major items, there is correspondence between national classifications and those of the *GFSM 1986*, with transactions recorded on a gross basis. Stocks and flows are valued at current market prices, revenue is recorded on a cash basis, and expenditure on an accrual basis. Following international standards, government finance statistics are a consolidation, not an aggregation, of the transactions of the respective NFPS components.

34. The analytical framework for compilation and dissemination of the **monetary statistics** reflects broadly concepts and definitions that are broadly consistent with the *Monetary and Financial Statistics Manual 2000 (MFSM 2000)*. These concepts include valuation of financial assets at market prices, accrual basis accounting, and presentation of

⁵ Recently, the Western Hemisphere Department of the IMF prepared a preliminary balance sheet of public sector assets and liabilities in an effort to generate interest in balance sheet-based fiscal analysis and promote adoption of the *GFSM 2001*.

assets and liabilities in gross terms. However, credit union data are not included in the aggregated accounts of other depository corporations. In addition, there is insufficient information on transactions involving residents and offshore units of banks. Financial instruments are classified largely according to international recommendations.

35. Statistics are periodically revised to reflect changes in the structure of the financial sector and of financial instruments. A new sectorization matrix to be introduced shortly will help bring residence and sectorization more in line with international guidelines.

Accuracy and reliability

36. For the **national accounts**, proper implementation of the *1993 SNA*, covering virtually all the accounts in the system, requires a large number of economic censuses and surveys. Surveys are conducted directly by the BCE and through agreements with INEC and other institutions. With financing from the IDB, INEC plans to launch a household income and expenditure survey in 2002 and economic censuses in 2003 (the last ones took place in 1980). Data sources include INEC's annual economic surveys, the BCE's quarterly surveys, and financial statements collected by the SC. However, INEC's annual surveys only cover establishments with 10 or more employees and the BCE's quarterly surveys cover trade only partially and do not include other services. Broader coverage of source data is also needed for the quarterly accounts of the agricultural, construction, and services sectors.

37. The BCE evaluates and validates consistency of data received from INEC, the SC, and other sources. Consistency of aggregates is attained within the framework of supply-use balances, which are produced for about 300 products and groups of products. The balances are calculated at current, previous, and reference period prices, ensuring consistency of current values, volumes, and price indicators. Annual national accounts are disseminated in three versions, provisional, semi-final, and final. Each incorporates revised data and broader sources; revision studies are conducted only when there is a change in the reference period.

38. Sound methods are used to compile the **U-CPI**. The basket of goods and weights are derived from the National Household Income and Expenditure Survey 1994/1995 (ENIGHU 1994/95). The survey is based on a random sample representative of urban households and provides sufficient disaggregated data. While a new ENIGHU is to be launched in 2002, surveys and changes in the U-CPI base have been conducted irregularly and less frequently than suggested by international guidelines. The price collection is broad-based, with some 11,700 price quotations obtained in 12 cities for the 197 items in the basket. Formulae, techniques, assessment and validation are adequate.

39. Sound methods are used to compile the **PPI**. The weights and selection of the basket of manufactured and mining goods are based on the manufacturing and mining survey of 1995, which provided production and sales data with ample detail. This survey, however, covered only establishments with 10 or more employees. Prices are collected monthly through interviews at 1,097 establishments, from which 1,419 quotations are obtained for 1,034 products. Formulae, techniques, assessment and validation are adequate.

40. The source data used in compiling the **balance of payments** are generally adequate. The main data sources are the foreign trade and external debt statistics, the databases of the SB and SC, and direct surveys, but there is a need to conduct a survey to improve estimates of travel expenditure. Some coverage adjustments are made to the source data in the goods account. The data reported in the surveys are verified and the results of the compilation validated. However, studies and analyses of the revisions are not performed. Furthermore, the statistical techniques used for estimating some components of the financial account (trade credits and assets in the form of currency and deposits) are not correct.

41. The charts of accounts and regulations published by the MEF are largely compatible with the **government finance statistics** categories recommended in the *GFSM 1986*. At present, there is no adequate official data source for compiling central government expenditure. The Integrated Financial Management System (SIGEF), adopted in 2001 as the official data source and implemented in 22 of 70 institutions, has led to a reduction in component detail. SIGEF requires from reporting units insufficient data to allow the break down of current and capital expenditure by budgetary item.⁶ Expenditure monitoring for institutions that have not yet adopted SIGEF is based on the previous “Savings-Investment-Financing Account” system. In view of the constraints imposed by SIGEF, the MEF manually compiles source data for central government expenditure, with the detail needed to ensure observance of the SDDS and preparation of the bulletin *Información Estadística Mensual*. It should be noted that monthly data for central government expenditure by function are estimates, in spite of the availability of relevant source data in the MEF.

42. The source data for the rest of the NFPS include financial statements and budget execution statements sent directly to the BCE. The information is monthly, except for local governments and universities, which report annually. In these cases, monthly data are obtained from the “Budget Execution System,” which the BCE has developed mainly on the basis of banking system information. Most source data are not timely despite the fact that the Budget Law establishes a short deadline (10 days) for submitting information to the MEF.⁷ In such cases, estimates are prepared on the basis of historical data and the annual budget. Surveys are not conducted to ensure full coverage of local governments, and only the most important local governments are covered. Data sources used in GFS compilation are assessed manually and there is no formal process to evaluate the accuracy of the information. The BCE’s electronic fiscal database has some automatic data validation features to help ensure the quality of the intermediate and final output data. The BCE examines the reliability of the government finance statistics, which are updated and revised on an ongoing basis, as appropriate, but does not study or analyze revisions regularly.

43. Source data for the **monetary statistics** are sufficiently detailed with respect to financial instruments. However, the application of the principle of residence and the

⁶ At present, transfers to entities funded by the national budget are not disaggregated by intended use (wages and earnings, purchases of goods and services, IESS contributions, etc.).

⁷ Publication of the financial statements of public enterprises is also irregular.

sectorization of the economy are not fully consistent with international guidelines. The BCE survey is compiled on the basis of balance sheet data, and the consolidated balance sheet of depository corporations is compiled on the basis of balances submitted daily, with a lag of 48 hours through the BCE electronic mailbox. Collection, verification, and validation of source data are automated. Basic statistics are cross-checked with balance sheet data, and financial institutions are notified of inconsistencies. Revision studies are not conducted regularly.

Serviceability

44. Users of the **national accounts** are not consulted regularly, though there is occasional contact with users in selected institutions. Data subject to the SDDS meet periodicity and timeliness requirements and accounts are consistent internally and with other datasets. Provisional and other versions are disseminated on the BCE Web page. The policy on revisions is not disseminated and reasons for revision are only given for quarterly data.

45. Users of the **U-CPI** and **PPI** are not consulted regularly, but their views are sought through occasional meetings. Periodicity and timeliness follow best practices, and indices are consistent over long time periods. The U-CPI is published on the last business day of the reference month, and the PPI is published during the first two weeks of the month following the reference period. The policy on revisions is not publicly stated.

46. Users of the **balance of payments** are not consulted regularly. The BOP is disseminated quarterly and complies with SDDS requirements for periodicity and timeliness. Annual BOP statistics are published along with those for the fourth quarter. There is consistency between quarterly and annual estimates in terms of concepts, definitions, and classifications, except as regards arrears on external debt; there is also consistency in the time series. Conversion to *BPM5* format and methodology of annual and quarterly data for 1993-2000 was completed in 2001. While the BOP can be reconciled with the foreign trade, national accounts, and external debt statistics, monetary statistics are not used to derive BCE foreign asset flows not included in reserves and the asset and liability flows of the rest of the banking system. To meet SDDS requirements, the BCE plans to compile and disseminate the International Investment Position (IIP) by end-June 2002. Data published since 1997 are still provisional, and this is flagged in publications. There is no preset timetable for revisions.

47. Users of the **government finance statistics** are not consulted regularly.⁸ In general, periodicity follows the budget cycle, but data subject to the SDDS meet the periodicity and timeliness requirements. Published statistics follow generally accepted accounting standards and the recommendations of the *GFSM 1986*. Following adoption of the dollar as legal tender in January 2000, the sucre series were converted to dollars starting 1990. The new series are not internally consistent, because monthly data do not add up to quarterly data and the sum of the latter does not equal the annual total. There is no regular reconciliation with

⁸ The authorities do not transmit fiscal data to the IMF for publication in its *Government Finance Statistics Yearbook (GFSY)*.

statistics of other sectors, except the balance of payments. Revisions do not follow a schedule, and revised data are not clearly identified. Revision studies are not prepared.

48. Users of the **monetary statistics** are not consulted regularly. These statistics satisfy SDDS requirements for periodicity and timeliness, and the central bank survey exceeds them. Sectorization deficiencies and differences in the time of recording of financial transactions by the central bank and the commercial banks may account for discrepancies in the accounts. Central bank survey data are final and those in the financial survey are preliminary at the time of publication and become final three months after the reference period. However, this practice is not publicized by the BCE.

Accessibility

49. The **national accounts** are disseminated to the general public and government officials simultaneously via the BCE Web page and hardcopy. The BCE also disseminates metadata on quarterly GDP in accordance with SDDS requirements. Other metadata have been published in the BCE working papers series *Cuadernos del Trabajo*. However, it is not easy to access detailed sources and methods used in compiling the various annual national accounts aggregates. Both the Web page and printed publications provide the name of a contact person. Information is disseminated through the Web page on the availability of publications, a calendar of publications, and acquisition procedures.

50. **U-CPI** data are published on a pre-announced schedule through a press release and are posted on the BCE website. INEC also publishes the data in a monthly bulletin within 15 days following the press release. Long series at the 10-group level are posted on the BCE's website. Publications include a methodological summary, but detailed methodology is not available. INEC provides good assistance to users of price statistics.

51. The **PPI** series is published mid-month on the INEC website. Thirty days after the end of the reference month, the series are also published in a statistical bulletin containing disaggregated monthly series. Available methodological documentation is limited.

52. **Balance of payments statistics** are published quarterly, simultaneously with the monthly statistical bulletin *Información Estadística Mensual* and on the BCE Web page. Detailed information, including most of the standard components of the *BPM5* have only been disseminated in a publication covering the period 1993-2000,⁹ but a bulletin with more detailed and updated information is forthcoming. At present, the database with more detailed information cannot be accessed electronically. Statistics are released simultaneously to all users in accordance with an advance release calendar posted on the BCE website. The BCE Web page has a link allowing access to the metadata in the SDDS section of the IMF Web page, and it also includes a calendar of publications, laws, etc. A methodological summary is also published in *Información Estadística Mensual*, assistance is available on request.

⁹ The BCE does not report quarterly data to the IMF for publication in *International Financial Statistics (IFS)* or *Balance of Payments Statistics Yearbook (BOPSY)*.

53. The **government finance statistics** are presented in time series and graphs identifying main aggregates. Presentation formats differ from the tables recommended in the *GFSM 1986* in terms of detail, but the conceptual content is similar. There is no break down of financing and debt by holder and/or instrument, as recommended in the *GFSM 1986*. In addition, the lack of information on the general government hampers interpretation of the data and international comparisons. Monthly, quarterly, and annual statistics subject to the SDDS are disseminated via the BCE website . In January, a release calendar is disseminated on the Internet; there is also a summary methodological note on the BCE website. The working paper *Cuaderno de Trabajo sobre las Estadísticas de Finanzas Públicas en el Ecuador: 1971-1999*, prepared in 2001 and accessible to the public, contains comprehensive methodological notes, but no other detailed information on sources and methods is available.

54. The **monetary statistics** are available in print and electronically. Data are disseminated in accordance with an advance release calendar available on the BCE web page and on the DSBB. Statistics are disseminated simultaneously to all interested parties on the BCE website, where historical series with different detail can be consulted. This website contains a description of the main monetary variables and the methodology used in the compilation. Assistance to users is good.

IV. FUND STAFF RECOMMENDATIONS

55. Based on the data quality assessment, discussion with the authorities, and user feedback, the following action is proposed to bring the compilation and dissemination of macroeconomic statistics more in line with best practices and enhance their analytical usefulness. Recommendations about government finance statistics should be addressed with particular urgency. High priority recommendations are preceded by a “ “.

General Recommendations

- Reform the Statistics Law to make it consistent with the current division of labor among statistical agencies, and strengthen the mandate of these agencies to disseminate to the public the macroeconomic statistics and metadata they produce.
- At the highest political level, attach greater priority to the formulation of national statistical policy by reforming and strengthening CONEC, and ensuring that INEC, MEF, and the BCE assume key roles in the council.
- Establish formal arrangements to buttress ongoing collaboration between the BCE and the MEF in the production of government finance statistics, and clarify the role of these two institutions regarding the compilation of the national accounts.
- Initiate regular consultations with users, inform the public ahead of time of planned major methodological changes, disseminate revision policies, and prepare and publish revision studies.
- Ensure that statistical units have adequate staff and training.

National Accounts

High priority

- Compile national accounts series (in nominal and constant terms) denominated in US dollars.
- Expand the coverage of source data for compilation of the quarterly accounts, conducting surveys of agricultural activities, construction, trade, and other services.

Other key recommendations

- Apply the Classification of Individual Consumption by Purpose to household final consumption expenditure.
- Record government revenue on an accrual basis.
- Start preparations to change the base year on the basis of the 2001 censuses (population and housing, and education), the upcoming household survey, and the economic censuses scheduled for 2003.

Urban Consumer Price Index and producer price index

High priority

- For the U-CPI, use 1993 SNA definitions, concepts, and classifications in the new income and expenditure survey of households to be conducted this year.
- Establish a program to conduct regular household income and expenditure surveys and to update the base year of the U-CPI every five years.

Other key recommendations

- Adopt the recommendations of the new CPI compilation manual (being drafted by a group working under the auspices of the ILO) in the upcoming change of the base year.
- Disseminate more comprehensive information on CPI compilation methodology.
- Prepare a program of base year changes for timely updates of PPI weights and basket.
- Prepare and disseminate more comprehensive information on PPI compilation methodology, to provide better service to users.

Balance of Payments Statistics

High priority

- Compile the international investment position ensuring consistency with the financial account of the balance of payments.
- Introduce the accrual basis recording criterion for interest on the external debt.
- Regarding the external assets and liabilities of the BCE, record transactions affecting reserve assets separately from those related to liabilities—such as the ALADI position and gold swaps.
- Ensure consistency between quarterly and annual data on external debt arrears.
- Use the monetary statistics to calculate flows related with BCE foreign assets not included in reserves, and banks' foreign assets and liabilities.

Other key recommendations

- Conduct surveys to improve the estimates of the travel account.
- Revise the methodology used to estimate flows related with trade credits and currency and deposits in the financial account.
- Show breakdown of the components of “other investment” by institutional sector.
- In the balance of payments table in *Información Estadística Mensual* show adjustments to goods exports and imports on account of unrecorded trade on a gross basis and not as a net adjustment to imports, as is currently the practice.

Government Finance Statistics

High priority

- Compile and disseminate regularly statistics for the different levels of government (including consolidated central government and general government) with sufficient detail and following the sectorization, classification, and presentation recommended in *GFSM 1986*, or preferably *GFSM 2001*.
- Prepare and disseminate statistics on central government financing and debt (external and domestic; and short-, medium-, and long-term) by type of holder and instrument, according to recommendations in *GFSM 1986*, or preferably *GFSM 2001*.
- Thoroughly evaluate SIGEF as soon as possible and take any measures necessary to ensure that it meets the information needs of the MEF and the BCE.

Other key recommendations

- Establish a plan and timetable for adoption of the *GFSM 2001*.
- Expand the flow of source data from the MEF to the BCE to facilitate compilation of central government expenditure by function, on a regular basis and in a timely manner. Enforce the deadlines established for the submission of data by public sector entities, to reduce the use of estimates.
- Intensify efforts to collect quarterly data on local government operations and ensure that all majority state-owned enterprises publish quarterly financial statements.
- Disseminate routinely explanation of the discrepancy between “above” and “below” the line estimates.

Monetary Statistics

High priority

- Implement the new sectorization project as soon as possible, in order to permit better identification of public sector deposits and the foreign assets and liabilities of banks.
- Improve the coverage of the subsector “other depository corporations.”

Other key recommendations

- Given that there is no substantive difference between “nonmonetary” and “monetary” gold, reflect all BCE gold holdings as monetary gold in reserve assets to avoid confusing users, since nonmonetary gold is treated as merchandise according to *MFSM 2000* and *BPM5* definitions, and should not be considered a reserve asset.

- Prepare a plan for the introduction of a monetary survey of the offshore units of commercial banks. This would provide timely information on the transactions of these units with residents.

Table 2. Ecuador—Data Quality Assessment Framework: Summary Presentaion of Results

Key to symbols: NA = Not applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed

	National accounts	Consumer prices	Producer prices	Balance of Payments	Government Finance	Monetary Statistics	Comments
0. Prerequisites							
01. Legal and institutional environment	LO	O	O	O	LO	O	See paragraphs 21, 22
0.2 Resources	LO	O	LO	LO	LO	LO	See paragraphs 20, 22
0.3 Quality awareness	O	O	O	LO	LO	O	See paragraph 22, 24
1. Integrity							
1.1 Professionalism	O	O	O	O	O	O	
1.2 Transparency	O	LO	LO	LO	LO	LO	See paragraphs 25, 26
1.3 Ethical Standards	O	O	O	O	O	O	
2. Methodological Soundness							
2.1 Concepts and definitions	O	O	O	LO	LO	O	See paragraphs 31, 32
2.2 Scope	O	LO	O	LO	LO	LO	See paragraphs 29, 30, 31, 32, 34
2.3 Classification/sectorization	LO	O	O	LO	LO	LO	See paragraphs 28, 31, 33, 34
2.4 Basis for recording	LO	LO	O	LO	O	LO	See paragraphs 28, 29, 31
3. Accuracy and reliability							
3.1 Source data	LO	LO	LO	LO	LNO	LO	See paragraphs 36, 38, 40, 41, 43
3.2 Statistical techniques	O	O	O	LO	LO	O	See paragraphs 40, 41
3.3 Assessment and validation of source data	O	O	O	O	LO	O	See paragraph 42
3.4 Assessment and validation of intermediate data	O	O	O	LO	O	LO	See paragraphs 40, 43
3.5 Revision studies	LO	O	NA	NO	NO	LO	See paragraphs 37, 39, 40, 43
4. Serviceability							
4.1 Relevance	O	LO	LO	LO	LO	LO	See paragraphs 45, 46, 47, 48
4.2 Timeliness and periodicity	O	O	O	O	O	O	
4.3 Consistency	O	O	O	LO	LO	LO	See paragraphs 46, 47, 48
4.4 Revision policy and practice	LO	LO	LO	LNO	LNO	LNO	See paragraphs 44, 45, 46, 47, 48
5. Accessibility							
5.1 Data accessibility	O	O	O	LO	LO	O	See paragraphs 52, 53
5.2 Metadata accessibility	LO	LO	LNO	LO	LO	O	See paragraphs 49, 50, 51, 52, 53
5.3 Assistance to users	O	O	O	O	O	O	

INTERNATIONAL MONETARY FUND

ECUADOR

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

Response by the Authorities

March 5, 2003

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I. INTRODUCTION

The Central Bank of Ecuador (BCE), the National Institute of Statistics and Censuses (INEC), and the Ministry of Economy and Finance (MEF) have noted satisfaction with the results of the mission that prepared the data module of the Report on the Observance of Standards and Codes (ROSC). The report brings out the technical quality in the production of economic statistics, the methodological rigor in their compilation, the ease with which economic agents can access them, and above all, the positive rating given to Ecuador, considering that the assessment framework is the same applied in all IMF member countries.

This Response of the Authorities presents below clarifications concerning selected sections of the data ROSC. The intention is to provide information on actions taken and plans formulated following the ROSC mission that took place during April 11—25, 2002.

II. COMMENTS (BY SECTION OF THE ROSC)

Executive Summary

With respect to the National Accounts, it should be noted that, following the ROSC mission, the BCE prepared series (for the period 1993-2001) in current and constant dollars, with a new basis and new methodology (*1993SNA*). Such series were released in the National Accounts, on October, 2002 (hardcopy and BCE's website), in the hardcopy publication *Setenta y cinco años de información estadística: 1927-2002* (Seventy five years of statistical information: 1927-2002), on December, 2002 and in *Información Estadística Mensual*, monthly publication of December (hardcopy and BCE's website). The BCE has been disseminating the results among Ecuador's economic analysts, specialized press, and academic sectors, by workshop presentations

In July 2002, a technical assistance mission from the Fund reviewed in detail the tasks performed in the implementation of the 5th edition of the *Balance of Payments Manual (BPM5)* and made recommendations that will be adopted shortly.

In order to improve the quality, integrity, and coverage of the monetary statistics, the BCE has developed a "sectorization matrix" that will facilitate collection of quality data from financial institutions based on the principles of residence and institutional sector recommended by the IMF's *Monetary and Financial Statistics Manual*. In accordance with resolution No. SBS-2002-0297 of the Superintendency of Banks of April 29, 2002, the adoption of this matrix took effect in December 2002, as a supplement to the New Chart of Accounts issued by the Superintendency for adoption by the entire financial system. At present, the first reports of the sectorization matrix have been received from the financial system. The information is being depurated in accordance with the established guide line. Once the information will reach the adequate quality, it will be introduced on the compilation of the monetary statistics.

Assessment of Data Dissemination Practices and the SDDS

The Data Template on International Reserves and Foreign Currency Liquidity has been sent to the IMF on a monthly basis beginning in December 2000. A complex negotiation process began with the IMF balance of payments specialists at that time. It pertained to the format and content of the Data Template. These negotiations lasted several months, which delayed dissemination of the International Reserves Data Template. Finally, in July 2001, the Data Template was published on the IMF's electronic bulletin board.

Summary Data Quality Assessment

Prerequisites of Quality

Under the Law, the BCE is not a member of the Statistics and Censuses Council (CONEC), or explicitly a member of the National Statistical System (SEN), despite the fact that it is the only institution that generates key macroeconomic summary statistics. Precisely one of the changes that should be included in a new Statistics Law is that the BCE should be a member of CONEC and that it should be able to participate in CONEC's decision-making process. The National Institute of Statistics and Censuses neither oversees nor coordinates the BCE's work programs.

This Law requires urgent amendments to be adapted to the current reality. This would also provide adequate boundaries for the scope of the work of the entities that are part of the national statistics system. This in turn would provide for better management of Ecuador's scarce human and technical resources.

Methodological Soundness

Adoption of the sectorization matrix by financial institutions will facilitate compilation of monetary statistics. The matrix is to enhance clarity in the key areas of residence and sectorization of the economy, in accordance with international recommendations.

Ninety-five percent of all transactions executed by the financial system with the private and public sectors are reflected in the report *Panorama Financiero*. As of July 2002, data on Savings and Loan Associations were also included in the financial survey under "other deposit corporations".

The BCE receives data on the balances of offshore branches of commercial banks through the Base Statistics Subprocess. The compilation of a monetary survey for these institutions, by the very nature of their operations, requires an in-depth study of the financial instruments they handle. This is being undertaken with the collaboration of IMF specialists in this area. It is expected to include in Financial Panorama the offshore accounts.

Accessibility

Annual and quarterly balance of payments statistics are published in *Información Estadística Mensual*, both on the BCE web page and in hard copy, with an analytical summary based on the *BPM5*. The BCE's new web page is being redesigned. It will provide more detailed data than that currently available. In particular, the publication *Boletín Trimestral de la Balanza de Pagos del Ecuador* releases annual and quarterly data for the last three years with a more detailed information than the *Información Estadística Mensual*: standard and analytical presentations of the balance of payments, exceptional financing and the annual International Investment Position. It also disseminates goods, services, income, transactions accounts and direct investment, external debt and international reserves. The publication includes methodological notes with explanations and definitions.

Fund Staff Recommendations

National Accounts

The BCE has prepared supply and use tables for the 1993-2001 series, in current and constant dollars (in prices of 2000). The key macroeconomic aggregates were published in the November 30 issue of *Información Estadística Mensual* and were posted in the BCE's website on December 3, 2002.

Balance of Payments Statistics

Beginning with *Información Estadística Mensual* Bulletin No. 1802 of April 30, 2002, a summary balance of payments table is being disseminated, with net adjustments to exports and imports, separately.

DETAILED ASSESSMENTS USING THE DATA QUALITY ASSESSMENT FRAMEWORK

National accounts

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

The BCE has been responsible for the National Accounts since the early 1940s, when the Economic Research Department was created. This Department later gave rise to all the BCE's technical units.

Concerning the balance of payments, the ROSC states in page 62, (Part V) that:

“The BCE is responsible for compiling and disseminating balance of payments statistics. By Executive Decree 1589 of June 13, 2001, published in the Official Gazette, No. 356 of June 27, 2001, the President of the Republic approved the reform of the

Charter of the Central Bank of Ecuador. The Charter establishes as part of the sphere of action of the General Directorate of Studies the role of compiling and developing basic and macroeconomic summary statistics for national and international use. The Directorate of Economic Statistics, which is part of the General Directorate of Studies, has the mission of cataloguing external and real, monetary, financial, and fiscal statistical indicators and compiling summary statistics.”

This means that there is compliance with the provisions of the law, as compilation of the national accounts is contemplated as part of the preparation of both summary and real sector statistics.

The Central Bank of Ecuador’s Bylaws, approved by Presidential Decree, assign the responsibility for summary statistics (Balance of Payments, National Accounts, Monetary Statistics, etc.) to the BCE. This Decree is of a higher hierarchical order and has greater legal force than a Ministerial Resolution. In this regard, the change in the base year for the national accounts (from 1975 to 1993) and the dollarization of the macroeconomic aggregates (price base = 2000) has consolidated the BCE’s technical and legal responsibility for compiling the national accounts.

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

At present, the BCE follows the System of National Accounts 1993, which states that “mineral exploration is not included in intermediate consumption. Whether or not exploration is successful, it is necessary to acquire new reserves. Therefore, it is classified as gross formation...” (6.166).

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

An adaptation of the classification by function is underway. It is worth noting, however, that the Manual does not set hard and fast rules. It reads (9.63): “The CPC may be used for a breakdown by type of good or service. The Classification of Individual Consumption by Purpose may be used for a breakdown. By purpose ...”.

2.4.2 Recording is done on an accrual basis.

This would be difficult for the Ministry of Economy and Finance to implement at this stage.

3. Accuracy and reliability

In the BCE's "regular" publications there is an analysis of differences, in terms of rates of change, for activities and elements of supply. This is the only thing that can be said publicly about differences, as it is assumed that "the latest data are the best." However, internally, the "direction of the differences" is analyzed: systematic error is indicated if a given variable is found to be "systematically lower" in the various versions of the accounts. Existence of this analysis did not become evident during the mission because the assessment focused on a series calculated under a special project (change of basis).

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

A new household survey is urgently required to improve the consumption vector and particularly to segregate household accounts by income level. This is certainly the area on which Ecuador should focus to improve implementation of the System of National Accounts 1993. The work has been undertaken to obtain household accounts, in particular mixed income, besides a new investigation is needed to improve the results. The BCE has requested to the INEC a new urban income and expenses household survey that will be held during this year. While intra-year statistics on prices do exist, lack of data on volume poses a major problem.

3.2.1 Data compilation employs sound statistical techniques.

Production approach procedures will be enhanced in tandem with an effort to improve household accounts by income bracket.

Conversion to a Central Product Classification / consumption function table is relatively easy and will be carried out in the short term. For the time being, priority has been given to dollarizing the national accounts. As noted, the number of National Accounts Unit specialists is the bare minimum necessary. Therefore, tasks will need to be prioritized.

Nonresident spending is recorded under direct purchases, as recommended by the *1993SNA* (4.119): "Personal spending for nonresident workers ... have been recorded under direct purchases by nonresidents on the domestic market ...". Nonetheless, an effort should be made to avoid presenting this vector in net terms (under final consumption) to facilitate analysis of resident spending abroad.

A difference between the Consumer Price Index and the GDP deflator (DEF) is oil, which has a substantial weight in output. It should be noted that the DEF is the result of double deflating, thereby constituting a first difference. In this sense, the influence of the production price of oil (constructed on the basis of the international price) is significant.

3.5 Revision studies

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

Any user can visit the BCE's web page and ask questions to a designated person, whose e-mail address is listed.

4.2.1 Timeliness follows dissemination standards.

By November 2002, national accounts series in current dollars and in constant dollars of 2000 were being disseminated.

4.2.2 Periodicity follows dissemination standards.

In an effort to preserve institutional memory, a publication containing the complete national accounts in sucres and with 1993 as a base year is being compiled. It covers the central framework of the system (1993-1999) entirely.. Meanwhile, the dollar series, with 2000 as a base year, have been pulled back to 1950, in order to enable the identification of new causality relationships (direct and indirect) and indicators for the quarterly accounts. This information has been released in *Setenta y cinco años de información estadística: 1927-2002* (Seventy five years of statistical information: 1927-2002), December, 2002.

The work has been undertaken to change de denomination into dollars and the year base for the quarterly national accounts. At present, only the data at constant prices are disseminated, in the CBE's publication *Cuentas Nacionales Trimestrales*. Data at current prices in dollars will be released on March 31, 2003.

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

On the occasion of the dissemination of the 1993-2001 series in current and constant dollars, workshops are being held to disseminate the methodology and results of the new national accounts among economic analysts, economic editors of the Ecuadoran press, academics, and private entrepreneurs in the country's leading cities. The new series are also being sent to Ecuador's representatives to the International Agencies.

Balance of Payments Statistics

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

Beginning with Bulletin No. 1802 of *Información Estadística Mensual*, of April 30, 2002, summary balance of payments tables have been published, with net adjustments to exports and imports, separately.

Monetary Statistics

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

In July 2002, the classification of the economy by sectors was modified. Monetary deposit companies and other companies were redefined as a single sector, “other deposit corporations”. Other deposit corporations include banks, Banco Nacional de Fomento, finance companies, mutual savings banks, cooperatives and Banco Ecuatoriano de la Vivienda.

INTERNATIONAL MONETARY FUND

Ecuador

Detailed Assessments Using the Data Quality Assessment Framework (DQAF)

Prepared by the Statistics Department

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This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Ecuador's Report on the Observance of Standards and Codes (ROSC)—Data Module. It also includes appendices with a summary of the Special Data Dissemination Standard, the DQAF generic framework, and Ecuador's legal and regulatory framework for compiling Macroeconomic Statistics.

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ACRONYMS

<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
BCE	Central Bank of Ecuador
BIS	Bank for International Settlement
<i>BPM4</i>	<i>Balance of Payments Manual, Fourth Edition</i>
<i>BPM5</i>	<i>Balance of Payments Manual, Fifth Edition</i>
DSBB	Dissemination Standards Bulletin Board
ENIGHU	National Survey of Urban Household Income and Expenditure
<i>GFS</i>	<i>Government Finance Statistics</i>
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
GDP	Gross Domestic Product
IMF	International Monetary Fund
INEC	National Institute of Statistics and Censuses (<i>Instituto Nacional de Estadística y Censos</i>)
ISIC	International Standard Industrial Classification of all Economic Activities
OECD	Organization for Economic Cooperation and Development
U-CPI	Urban Area Consumer Price Index
PPI	Producer Price Index
ROSC	Report on Observance of Standards and Codes
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MEF	Ministry of Economy and Finance
SDDS	Special Data Dissemination Standard
SB	Superintendency of Banks
SC	Superintendency of Companies

I. NATIONAL ACCOUNTS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The national accounts are compiled and disseminated by the Central Bank of Ecuador (BCE), based on the Executive Decree 1589 of June 13, 2001, published in the Official Gazette, No. 356 of June 27, 2001. That decree approved the Charter of the BCE, which describes the organic structure of the units making up the bank, including the Directorate of Economic Statistics whose mission is to “systematize monetary, financial, fiscal, external and real sector statistical indicators; prepare summary statistics; and prepare forecasts of real sector variables.” The Rules for the Production and Dissemination of Statistics of the BCE (Annex 1 of Monetary Board Resolution JM-626-BCE of May 13, 1997)—hereinafter, Rules—state that the BCE is responsible for compiling summary statistics, including the national accounts.

However, by ministerial agreement, the Ministry of Economy and Finance (MEF) in April 2001 issued the Organic Rules, paragraph 5.1.1.4 of which establishes a National Accounts Coordination Unit whose mission is to “produce the national accounts so as to ascertain the behavior of the macroeconomic aggregates, including the domestic and external balances of the economy.”

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

The national accounts are compiled and disseminated by the BCE from basic data obtained from public and private institutions. The BCE coordinates with such institutions the transmission of those data in the required timeframes and formats.

The main sources of basic statistics are censuses and economic surveys conducted primarily by the National Institute of Statistics and Censuses (INEC), as well as administrative registers compiled by the Ecuadoran Social Security Institute (IESS), the Superintendency of Companies (SC), the MEF (Internal Revenue Office, Customs Directorate), and others.

There are procedures to ensure the efficient and timely flow of data to the BCE. The BCE has signed agreements with various institutions (e.g., with the INEC, the SC, the Superintendency of Banks (SB), and others). Under several of these agreements, interinstitutional coordination committees are created to organize activities aimed at achieving objectives, monitoring implementation, and assessing program activities. Such agreements are generally established for five-years, renewable by consent of the parties.

An essential source of basic statistics is the INEC, whose technicians and authorities are informed of the needs of the BCE including through presentations (on the usefulness of selected statistics) and working meetings aimed at expanding survey coverage and improving survey forms. Similar actions take place with other institutions.

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

The Statistics Law of May 1976, published in the Official Gazette, No. 323, states in its Article 21 that individual data obtained for the purposes of statistics and censuses shall be restricted; as a result, no disclosure is allowed of individual data of any type; nor may such data be used for any other purposes, such as taxation, conscription, or judicial investigation. The Law specifies that “only numerical summaries, overall aggregates, additions, and, in general, impersonal data, can be disclosed.” In surveys and other statistical research, reporting entities are informed that the background information provided will be used solely for statistical purposes.

The procedures and methods used in the compilation of the national accounts ensure that any data to be disseminated are aggregated and not individualized. In many cases aggregates are compiled on the basis of individual data, but access to the latter is restricted to the personnel who requested such data coverage. Computer programs have mechanisms for protecting restricted data, with access allowed to them through the use of personal codes.

In the Rules and in the regulations governing data dissemination by the BCE, there are provisions for the imposition of penalties on any staff member disclosing confidential data. The Law on the Monetary Regime and Banco del Estado of May 7, 1992, in its Article 92(m), authorizes the BCE General Manager to sanction with dismissal any personnel disclosing confidential data on subjects dealt with in the Monetary Board or at the Central Bank, or any person using such data for personal purposes or to the detriment of the government, the Central Bank, or third parties.

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

The BCE Charter gives it legal authority to demand that data be reported to it. However, as part of the national statistics system, the BCE has the authority to request data. Taking account of the fact that the data provided to the BCE by reporting entities, individuals, and institutions are handed over mainly on a voluntary basis, means are sought to maintain good relations that facilitate data transmission. In turn, the statistics compiled are made available to reporting entities, and they are thus provided with a service that encourages collaboration with the BCE. Given its prestige, the BCE generally obtains the requested data.

0.2 Resources

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

The number of staff compiling the national accounts was affected by the sharp reduction in personnel associated with the overall reform and modernization of the BCE. Professionals with a great deal of training and experience retired and were partially replaced by personnel without sufficient training. As a result, the number and qualification of the national accounts technicians is presently inadequate. The reduction in staff occurred during a period when work was underway to move from the national accounts series with 1975 as the reference period to a new series with 1993 as the reference period.

In this context, personnel are assigned based on an Annual Strategic Plan, which describes the new products to be generated during the period, estimates of personnel requirements, and financing needs.

The National Accounts Unit has 16 technicians. Their formal training is sound, as the unit has four staff members with master's degrees, three who are master's degree students, seven economists, and one mathematician.

After the personnel cut, technicians were rehired for a year to train new technicians and complete certain tasks.

Training efforts are also being made, with personnel being sent to seminars and courses organized by ECLAC, the Andean Community, and the European Center for Statistics Training in Developing Countries (CESD) in Spain. It is expected that participants will be sent to IMF courses. In addition, the more experienced and more knowledgeable staff members routinely train those with less experience.

There is an adequate supply of information technology resources, including leading-edge hardware, systems, and applications. Also, advisory assistance from France is available regarding computer programs for compilation of the national accounts.

0.2.2 Measures to ensure efficient use of resources are implemented.

The design of the strategic plan mentioned above and the preparation of the pertinent budget facilitate the allocation and efficient use of the available resources. Considering the staff shortages already noted, the tasks of compiling the accounts have had to be judiciously distributed.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality.

The BCE attaches great importance to improving the quality of the statistics it produces, as required by its Charter, the above-mentioned Rules, and other actions aimed at improving the quality of its products.

The program for changing the national accounts reference period and adopting the *System of National Accounts 1993 (1993 SNA)* made it mandatory to review the data sources, incorporate new sources, and adopt better compilation methods. This has led to an improvement in the quality of the statistics.

0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics.

The National Accounts Unit tries to identify problems linked to various phases of data collection, processing, and dissemination, and efforts are continuously made to solve them.

Although not systematically, there have been user surveys, the most recent of which took place five years ago. Although not systematically, user comments are requested on issues related to the quality of the national accounts.

0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.

Account is taken of the tradeoff between accuracy and timeliness when users are informed of the provisional nature of figures published as first estimates and therefore subject to revision.

Account is taken of the need to improve data quality when the work program is being planned. Contacts are maintained with various units using the national accounts prepared by the BCE, to analyze the accounts series and identify new needs.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis.

The rules for the production and dissemination of BCE statistics explicitly state that “official statistics must be compiled and processed professionally.” Accordingly, the BCE “will act in accordance with strictly technical considerations, governed by scientific principles and professional ethics.” Statistical work is not subject to undue influence, external or internal. Professional competence is the basic principle for the hiring and promotion of staff.

The BCE's General Directorate of Studies fosters professionalism in its staff by organizing presentations, conferences, and workshops at the national level. This is done especially when there has been major progress in the national accounts area. In addition, staff members are encouraged to publish special studies, for which various series are maintained detailing methodological issues arising in the compilation of the national accounts and other areas (in the *Cuadernos de Trabajo* [Workbooks] series); research results are presented (technical notes); and papers presented at seminars and/or works by national and foreign economists on important topics are published. To protect the institution's reputation of professionalism, the work of researchers is always analyzed by an editorial council before publication.

1.1.2. Choices of sources and methods are informed solely by statistical considerations.

The rules for the production and dissemination of BCE statistics also specify that it is "the prerogative of the BCE to choose the sources it considers most appropriate, mindful of quality, timeliness, cost, and the workload of the reporting entities." The following is also indicated: "Users who believe that the procedures indicated are not the best are free to communicate their differences in writing to the General Management..." The unit that produces the national accounts, in consultation with the Directorate of Economic Statistics to which it belongs, chooses the sources and methods and the statistical techniques that it deems most appropriate for making estimates.

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

According to the BCE's Rules, "Users who believe that the procedures indicated are not the best are free to communicate their differences in writing to the General Management of the BCE. The BCE's technical units may also respond to incorrect interpretations or inappropriate use of the data."

The National Accounts Unit has occasionally made comments and provided clarifications in communications media or specialized publications. Workshops have sometimes been conducted for journalists to explain the use of the data and any changes in the methodology used for estimating the national accounts statistics, so as to prevent incorrect interpretations.

1.2 Transparency

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

The laws, rules, and regulations under which the national accounts, among other statistical products, are compiled are published on the BCE's web page.

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

No governmental authority has access to the data prior to their release. The national accounts are released simultaneously to the public and to the authorities.

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

Data released to the public are clearly identified as products of the BCE, whose seal is clearly shown on its publications and other means of dissemination. The source of data provided is indicated, whether in the case of the BCE's own products or of its reproduction of data from other statistical agencies.

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

Major methodological changes are generated by changes in national accounts reference periods. Changes in methodology, source data, and statistical techniques are announced to the public when data incorporating such changes are being released for the first time. The changes made and the reasons for such changes are thus widely disseminated.

1.3 Ethical standards

The BCE has established a code of ethics that is well known to the staff.

2. Methodological soundness

The BCE has been disseminating a series of annual national accounts with 1975 as the reference period, conceptually based on the *1968 SNA*. The quarterly accounts it disseminates are also still processed within the conceptual framework of the *1968 SNA*. Since 1996, a major project to change the reference period to 1993 has been under way, and the *1993 SNA* is being applied to compilation of the new series. The dissemination of the new series on the BCE's Web page began in 2001, initially covering the period 1993–97. Accounts in the new series will also be compiled for the period 1998–2000, and it is expected that provisional estimates for 2001 will be ready in 2002. In the compilation of the new series, the quality of the national accounts was improved through the application of the *1993 SNA* conceptual framework, an increase of the basic data sources and their quality, and the adoption of better estimating techniques.

The BCE publishes both series (reference periods 1975 and 1993, compiled simultaneously) and is assessing the quality of the new series. The quarterly accounts are not yet compiled within the *1993 SNA* framework, but the publication is planned for December 2002 of the results of the third quarter with 1993 as the reference period.

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 of the *1993 SNA* are now being applied to the annual national accounts with certain exceptions mentioned below.

2.2 Scope

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

The national accounts cover the economic activities of all resident institutional units. In conformity with the residence concept in the *1993 SNA*, this includes the activities of enterprises located in free trade areas, Ecuadoran embassies, and resident Ecuadoran workers providing their services abroad for less than a year.

The production boundaries are those established in the *1993 SNA*, independently of the coverage actually achieved. The quantification of own-account production of all goods for household's own-consumption is based on the household income and expenditure survey, conducted with 1994-1995 as the reference period, and the INEC's 1995 and 1998 living conditions surveys. Own-account research and development activities are not identified separately, and the costs incurred are recorded together with those incurred in the principal and secondary production of establishments.

The production of goods for own-account fixed capital formation is included, based on surveys conducted by the INEC and other sources. Agricultural work in progress is estimated on the basis of data from the agriculture and livestock balance sheet, from which production costs in each phase of the agricultural process can be derived, from soil preparation to harvesting, and this means that they can be broken down over time. As these costs are not increased by an operating surplus margin, agricultural work in progress is therefore valued at cost. The value of mining prospecting activities is also estimated; this value is relatively high in light of the importance of petroleum, for which basic data are available. The production of originals for literary or artistic recreation and the sale of unlawful products to buyers willing to purchase them are not quantified, given the practical problems of obtaining the pertinent data. The production of computer programs traded in the market is recorded as such, but not in the case of own-account production, the costs of which remain mixed up with the costs of the principal and secondary activities of the establishments concerned.

The coverage of assets is generally consistent with the recommendations in the *1993 SNA*, even though estimates of assets related to national defense that can also be used for civilian purposes are unavailable; defense-related assets therefore continue to be included in government intermediate consumption. Nor are historical monuments and most valuables included in assets. By contrast, the value of agricultural work in progress is included. The

production value generated by mining activities is included as an intangible fixed asset, whatever the outcome achieved. Computer programs are only partially included in assets when acquired from third parties but are excluded when developed internally by the enterprise. A similar situation occurs with the acquisition and development of databases, which are generally not included when produced for own-use. Computer programs and databases should be recorded as fixed assets, in accordance with the *1993 SNA*.

2.3 Classification/sectorization

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

Sectoral classification is generally as recommended in the *1993 SNA*. No separate sector was created for nonprofit institutions serving households (NPISHs), which are still included in the households sector. The classification of economic activities used is based on the International Standard Industrial Classification of all Economic Activities (ISIC), Rev. 3. In the quarterly accounts, ISIC, Rev. 2, is still used; it will be replaced by ISIC, Rev. 3, when 1993 is adopted as the new reference period for these accounts. The national classification of products is based on the Central Product Classification (CPC). Household consumption is classified by product because it is included in the compilation of the balances by product. The Classification of Individual Consumption by Purpose (COICOP), recommended in the *1993 SNA*, is not applied to household consumption. The Classification of the Functions of Government (COFOG) is consistent, at the one-digit level, with that in the *1993 SNA*.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

Market output is valued at basic prices, and production for own-use is valued at the equivalent market price or at production cost when basic prices are unavailable. Intermediate consumption is valued at purchaser prices, excluding the deductible portion of value-added tax; sales tax and selective consumption taxes, where applicable, are included. Household final consumption expenditure and gross capital formation expenditure are valued at purchaser prices, including distribution margins and the taxes applicable to products when the latter are not deductible. Exports and imports are valued f.o.b. Imports at the product level are valued c.i.f., but c.i.f./f.o.b. adjustments are made at the aggregate level. Unitary and multiple exchange rates are used, with estimates made of implicit subsidies and taxes on imports and exports subject to multiple exchange rates.

2.4.2 Recording is done on an accrual basis.

Generally, transactions are recorded on an accrual basis. One exception is government, whose revenue is recorded on a cash basis.

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

Grossing and netting procedures follow the *1993 SNA* recommendations .

The aggregates and balances that are to be estimated, according to the recommendations of the *1993 SNA*, in both gross and net terms are obtained by subtracting from the aggregates the related fixed capital consumption. The latter is estimated by applying the perpetual inventory method (PIM) to calculating the stock of fixed capital. The stock of fixed capital and the corresponding fixed capital consumption are estimated by type of good, economic activity, and institutional sector, in both current and constant prices.

Transactions between establishments belonging to the same enterprise are recorded in gross terms, while the goods and services that an establishment produces and transfers to another establishment of the same enterprise are recorded as part of the production of the producing establishment.

3. Accuracy and reliability

The national accounts system covers practically all the accounts in the *1993 SNA*, which means that a wide-ranging program of censuses and economic surveys is required, as well as quality administrative records with wide coverage to facilitate their proper processing. These conditions are very difficult to meet. The BCE is making enormous efforts to develop the basic statistics; it has carried out its own surveys and entered into agreements with the INEC, the SC, and other institutions so as to gain access to the pertinent economic surveys and administrative records, as can be seen in the quality and coverage of the new series of accounts with 1993 as the reference period. The INEC recently conducted the population and housing census and plans to begin the household income and expenditure survey this year (the previous one took place in 1994–95) and will carry out economic censuses in 2003 (the most recent ones took place in 1980). These initiatives will lead to a widening of the base of source data and an updating of the fixed ratios obtained from previous surveys and censuses. These new data sources should be useful for further updating of the national accounts reference period, given the major changes that the economy has undergone in recent years.

The main sources of data for the national accounts are the annual INEC surveys, the quarterly BCE surveys, the financial statements and balance sheets of enterprises that the SC requests, the government finance data from the MEF, and the foreign trade data from Customs, among others. The BCE frequently analyzes and crosschecks the consistency of the data obtained from the INEC, the SC, and other sources. The BCE has signed cooperation agreements with both institutions, and this facilitates the receipt and analysis of the data. The consistency of the national accounts aggregates related to the flows of goods and services is ensured within the framework of the supply and use balances calculated for about 300 products and groups of products. The balances are established at current prices for the previous year and for the reference period, and this ensures the consistency of the current price values, volumes, and indicators. The estimates are disseminated in a rectangular matrix containing 60 products or

groups of products and 47 economic activities. The annual national accounts are released in three versions: provisional, semifinal, and final. Each version contains revised data and covers wider sources than the previous version, but no studies are done on revisions.

3.1 Source data

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

There is no comprehensive, up-to-date record of enterprises and/or establishments that fully includes all the activities and unit types and can be used as a broad framework for sample surveys. However, the INEC has a directory of establishments, compiled following implementation of the 1980 economic census, which lists establishments with 10 or more employees and is updated constantly, so that up-to-date sample frames are available as regards the establishments listed in the directory. The establishments are classified in accordance with the ISIC, Rev. 3, but those whose principal activities are in tabulation categories A (agriculture, livestock, hunting, and forestry) and B (fishing) of the classification are not included.

The INEC carries out an annual economic survey of activities in mining, manufacturing, domestic trade, hotels and restaurants, and services, with wide coverage of establishments; this is a source of data provided at the four-digit level of the ISIC, Rev. 3. The results are obtained with an excessive lag (about a year and a half after the end of the reference period), and because more timely data are needed, the INEC also conducts a survey by sample, covering the same activities; its results are available approximately eight months after the end of the reference period. These data are disseminated at the two-digit level of the classification. In the design of the sample, two groups of establishments are covered: those with 10-99 employees and those with more than 100. For the first group, a probabilistic sample is selected, while all the establishments in the second group are included. The sample has national coverage, and grossing-up factors are derived on the basis of the sample design. The data collected are detailed enough for the purposes of compiling values for production, intermediate consumption, gross fixed capital formation, and changes in inventories. However, inasmuch as the latter item is estimated as the difference between final and initial inventories, they will include the holding gains or losses that caused the price changes.

The INEC also conducts a survey on the activities of the construction of buildings, using as a source the construction permits recorded at municipal offices. No survey is available, however, for on-site monitoring of building activities that would make it possible to estimate actual activity in each period. In addition, the INEC produces a construction price index covering prices of construction materials, equipment, and machinery, which is used to readjust the prices on contracts for works that the government implements using contractors.

The quarterly surveys conducted by the BCE cover various activities (agriculture, manufacturing, construction, petroleum, electricity, and others), but cover trade only partially and do not include other services.

The coverage of activities in the establishment surveys (in terms of sales value) within the largest industrial groups is generally satisfactory (60-80 percent) or good (more than 80 percent). This is attributable, in particular, to the high level of concentration of economic activity in large establishments. Accordingly, for example, the four largest establishments in each manufacturing branch cover a percentage equal or close to 100 percent of all sales in the tobacco industry, sugar mills, petroleum refineries, metallic and nonmetallic industries, brown sugar manufactures, transportation machinery and equipment, etc. Concentration indices estimated for 73 manufacturing branches show that 41 of them have a concentration index of over 75 percent and 23, an index of 50-75 percent. The relationship between sales and value added obviously varies from one branch to the next, but the high level of concentration implies that sample coverage is extremely high, as all the large establishments are included.

As regards household surveys, the most recent survey of household income and expenditure for which data are available dates back to 1994-95, with national urban coverage, and the most recent living conditions surveys took place in 1995 and 1998, with the 1998 survey also covering rural areas. The BCE has informed the INEC of the need to carry out these surveys more frequently. As already mentioned, the INEC plans to start a new household income and expenditure survey this year. Given that household income and expenditure surveys and living conditions surveys are not conducted on a continuous basis, techniques are used to allow for the extrapolation and retropolation of the results of these surveys. Accordingly, in the estimation of the composition of household consumption expenditure at constant prices, fixed ratios from the 1994-95 survey are being used.

Source data for estimating the government accounts are obtained primarily from the government finances, with operations carried out using budgetary and extrabudgetary funds included.

Budget execution data should be used, but they are available with a lag of more than a year. As of April 2002, budget execution figures were not yet available for 2000. Because data are required sooner, use is made of the so-called savings-investment account produced by the MEF and constructed on the basis of preliminary data and in much less detail. In the compilation of the provisional version of the government accounts, use is made of budget data, which are replaced in the semifinal and final versions by budget execution data, to the extent that these have been produced. The most exhaustive data with the highest level of detail are those produced annually and for which the lag is 12-18 months.

Defense-related data are received from the National Defense Board. The frequency is quarterly, and the lag is six months to a year.

Data on local government transactions, received quarterly, cover about 200 of the existing 220 municipalities. The lag is six to nine months.

Data for the rest of the general government sector are obtained with a lag of approximately one year, even though many public entities submit their data in a more timely way.

In addition to the government finance data, the National Accounts Unit produces estimates on the stock of fixed capital held by general government and the related consumption of fixed capital, obtained using the perpetual inventory method.

Detailed data are thus available for estimating the production, intermediate consumption, fixed capital formation, and final consumption expenditure of the government, as well as other aggregates and accounts described in the *1993 SNA*.

Basic infra-annual data are used as much as possible, and in particular data from the quarterly BCE surveys. However, there are not enough monthly and quarterly data on certain areas, especially production values and agricultural product prices, as well as trade and services activities, which generate a large percentage of GDP.

Ad hoc surveys are conducted to collect data from areas that the regular surveys do not cover, especially when the national accounts reference period changes.

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

In general, source data from surveys and administrative records meet national accounts needs, and when they do not, the data have to be adjusted to cover the needs in terms of classifications, valuation, time of recording, and so on. Especially in the case of the quarterly accounts, given that the methodology used is based on indirect or statistical and mathematical methods, attempts are made to ensure that the basic data are in conformity with the concepts, definitions, and coverage of the aggregate to be estimated. It is therefore natural for a selection to be made from the basic statistics to be used and, where necessary, for the pertinent adjustments to be made.

3.1.3 Source data are timely.

Reference has been made to the timeliness of the data derived from the INEC annual economic surveys and those related to government finance. Foreign trade data are obtained in timely fashion and in great detail. Monthly and annual data are obtained with a lag of one month. In the quarterly accounts, indices of unit value, volume, and value are used, constructed on the basis of the statistics on imports and exports, with a coverage of over 90 percent of the universe and with a fixed base selected in a specific quarter (1996). The indices are of the Paasche and Laspeyres type. Quarterly and annual balance of payments data are also obtained in timely fashion.

3.2 *Statistical techniques*

3.2.1 *Data compilation employs sound statistical techniques.*

Production approach procedures

Output estimates are compiled at detailed levels. The INEC mining and manufacturing survey provides data at the ISIC four-digit level, Rev. 3, and data by product at the CPC level. In addition, the BCE quarterly surveys provide data on the principal agricultural products and manufacturing at the ISIC two-digit level.

The INEC manufacturing and mining survey provides data that are sufficiently detailed for estimating intermediate consumption. Domestic and imported raw materials are broken down by product.

Owner-occupied dwellings output is valued as the estimated rentals that tenants would pay for similar accommodation. The consumer price index (CPI) provides monthly data on rents paid for rooms, apartments, and houses, for estimation of the rentals imputed.

Agricultural work in progress is estimated on the basis of the data in the agricultural balance sheet, which shows production costs from soil preparation to harvesting and is used for compiling the balances related to the gross fixed capital formation on plantations, including *banano*, coffee, cocoa, flower and rose plants, and oil crops. There are data on the movements of livestock herds and on livestock reared for purposes of food, by type of animal.

For major construction projects, the government contracts private enterprises and disburses the pertinent funds against the presentation of the bills for work completed and prior verification of works. There is no large-scale production of equipment (construction of ships and boats).

The perpetual inventory method is used for estimating the consumption of fixed capital, based on the economic life of each product included as capital asset—for plantations (depending on the product), machinery, and equipment (10 years); residential buildings (50 years); and nonresidential buildings (30 years). Estimates are by product, industry, and institutional sector.

Transactions are generally recorded on an accrual basis, but government revenue is recorded on a cash basis, even though some taxes are collected at source, which is similar to the accrual basis.

Supply and use tables are compiled at current prices, prior-year prices, and constant prices for the reference period. Implicit deflators can therefore be derived for the principal aggregates, and these deflators are adjusted for the concepts of price, coverage, and reference periods.

A wide range of independent price indices is used to value output and intermediate consumption, at the four-digit level of the ISIC and CPC.

Indicators of the volumes of taxes and subsidies on products are estimated by applying the reference period rates to the volume flows of the variables subject to taxes and subsidies.

Output volume of trade margins is estimated by applying the base-year margin rates to the corresponding volume of sales.

Any change in GDP volume is measured using 1993-base chain indices.

As regards expenditure approach procedures, GDP estimates by expenditure component are produced within the framework of the supply and use balances, based on the use of the largest possible amount of available source data.

Household consumption was estimated separately, based on the income and expenditure surveys and the living conditions surveys mentioned above. International advisory assistance was available for that purpose. In the estimation of the annual vectors of household consumption at constant prices, the use of fixed ratios that are more than five years old is excessive, as this covers a high percentage of the total.

For gross fixed capital formation, use is made of the data available from various sources, covering components of both supply and use and including data on imports of capital goods, from the BCE's investment survey, public and private construction of infrastructure works, machinery, and equipment for agriculture and other purposes.

As regards changes in inventories, direct data are available on petroleum and its derivatives; for the trade industry, data are derived from the balance sheets of commercial enterprises; and data are obtained on agricultural goods (including coffee, cocoa, rice, wheat, barley, corn, and tobacco) and on changes in inventories held by manufacturing establishments, obtained from surveys. No adjustments are made to eliminate holding gains or losses when the data received include them. At any rate, the value of changes in inventories for specific groups of products is established in the supply and use balances of those groups, and they may therefore also include errors and omissions.

Data on exports and imports are obtained from the foreign trade data at detailed levels of the customs classification.

The main classifications used with respect to expenditure components are as follows: the CPC is used for household final consumption expenditure, given that its composition is derived from the balances by product; the COICOP is not yet in use; and the COFOG is used for government final consumption expenditure. The classifications by product, industry, and institutional sector are applied to gross fixed capital formation. The classifications by product and institutional sector are applied to changes in inventories. A matrix of cross classifications

makes it possible to classify exports of goods in accordance with the Nandina Common Customs Classification (based on the harmonized system), the ISIC, CPC, and SITC.

In the estimation of annual vectors of household consumption at constant prices, the use of fixed ratios that are more than five years old covers a high percentage of the total but is very limited for the other expenditure categories, covering less than 20 percent of the pertinent totals.

Government final expenditure does not include secondary sales. The expenditure abroad of resident households is included in household final consumption expenditure and in imports, based on balance of payments data and travel of resident households. The expenditure of nonresident households in the economy is not included in household final consumption expenditure; rather, it is included in exports.

However, expenditure on items that are considered stores of wealth (such as jewelry and works of art) is not estimated separately as a change in those assets in the capital account, because acceptable basic data are not available.

Estimates of the volume of GDP expenditure components are obtained from the supply and use accounts, which are drawn up at constant prices by product or group of products, using a wide range of price indices to deflate current values and quantity and volume indices used as extrapolators, depending on their availability and quality.

The household consumption implicit deflator is generally consistent with the CPI, and the differences arising are explained, basically, by the greater coverage of household consumption in the national accounts, given that the basket used to calculate the CPI does not include the consumption expenditure of urban households with higher income (tenth decile) or the rural population, and the weights therefore differ from those in the CPI. In addition, with the implicit deflator obtained by dividing current expenditure by the volume in each period, the weights are updated.

Government final consumption expenditure is obtained by deflating the production cost components of the respective government output for final use.

Quarterly GDP is disseminated by branch of activity and expenditure component in current and constant 1975 prices. As already stated, there is a lack of proper price indicators and source data in various areas. This is not true in the case of foreign trade statistics, which are available in timely fashion and serve as a basis for the construction of unit value, quantity, and value indices for exports and imports of goods, with coverage of over 90 percent of the universe and a fixed base selected in a specific quarter (1996). The indices are of the Paasche type for unit values and the Laspeyres type for quantities. In the quarterly series with 1975 as the reference period, no appropriate benchmarking technique is used, but the Denton technique is employed in the new series with 1993 as the reference period, to match the quarterly estimates and the annual data. The new series, covering up to the third quarter of this year, will be disseminated late in 2002.

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

The adjustment procedures used depend on the indicator, in light of the adaptability of the classification adopted, the verification of coverage, and its valuation basis (cash or accrual).

Moreover, when a classification is used in the basic data that is different from that employed in the quarterly accounts, the pertinent aggregations or disaggregations are carried out as far as possible, so that proper indicators can be constructed for estimating the quarterly data. In addition, whenever the basic statistics have to be deflated, price indices are used that allow for the construction of appropriate volume indicators.

In light of the fact that priority is given in the estimation of the quarterly accounts to the use of mathematical statistical procedures, it is assumed that when the econometric adjustment is being made every quarter between the indicator and the annual account of the aggregate, the informal, hidden, and illegal activities recorded in the annual account will also be incorporated in the quarterly accounts.

3.3 *Assessment and validation of source data*

3.3.1 Source data

The National Accounts Unit analyzes trends in the source data derived from the annual and economic surveys as well as from administrative records, and when there is doubt about the quality of the data, those responsible for their tabulation are contacted for explanations. However, there is no routine assessment of the statistical techniques used in the sample surveys conducted by the INEC and by other institutions providing source data.

In the case of the annual accounts, given that the full INEC surveys base is available, the consistency of the data received is analyzed, as is done in the case of the data obtained from the SC. Data are also obtained from entrepreneurial organizations and other sources, which are also crosschecked with those already mentioned, to verify their consistency. Following the field research conducted for the purposes of the change in reference year, the quality of the data provided by various sources has been fully analyzed.

3.4 *Assessment and validation of intermediate data and statistical outputs*

3.4.1 Main intermediate data are validated against other information where applicable.

The data compiled on the basis of the main sources used for the national accounts are crosschecked with data from other independent sources when the latter are available.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

When the accounts of the institutional sectors are being compiled, a comparison is made between the financing capacity or requirement resulting from the capital account balance and the difference between changes in assets and liabilities in the financial account. If discrepancies are found, the processed data derived from the balance sheets, budgets, budgets execution, profit and loss statements, and various supplementary documents are reviewed.

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

In the case of the quarterly accounts, results are compared when secondary data are available, even though these are not abundant. However, adjustments are incorporated at the end of the estimation period, in the quarterly summary phase.

3.5 Revision studies

3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

As noted, the annual accounts are presented in three versions: provisional, semifinal, and final. Each version uses better data reflecting greater coverage; hence, when each version is being compiled, research is conducted on the behavior of the source data and the causes of differences. However, studies and analyses of revisions are not systematically carried out or disseminated, except when there is a change in the reference period.

4. Serviceability

4.1 Relevance

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

Although there is no formal process of consultation, continuous contact is maintained with users, who raise questions, request clarifications, and ask for additional specific data. While infrequently, some user surveys have been conducted, the most recent of which took place five years ago. Although not systematically, user comments are requested on issues related to the quality of the national accounts. The BCE is increasing services to users of the national accounts with a view to supporting the project to change the national accounts reference period from 1975 to 1993, adopting the conceptual framework of the *1993 SNA*, and working with the Ministry of Tourism on a project to construct a tourism satellite account.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards.

As noted in the previous section, Ecuador disseminates two series of national accounts at the same time. The annual and quarterly GDP series with 1975 as the reference period are disseminated in accordance with internationally established standards. The quarterly GDP estimates are disseminated with the timeliness established under the SODS. The annual GDP estimates are disseminated in their provisional version seven months after the end of the reference period; the semifinal version, one year and seven months after the end of the period; and the final version, two years and seven months after the end of the period.

4.2.2 Periodicity follows dissemination standards.

The new series of annual national accounts, based on the conceptual framework of the 1993 SNA and with 1993 as the reference period, are disseminated on the Web page, covering the period 1993–97; an annual series covering up to 2001 will be released end-July 2002, and the new quarterly series with the new reference period will be released end-2002.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset to which they belong (e.g., accounting identities are observed).

The employment of supply and use tables as a framework for compiling the goods and services accounts and the production accounts by economic activity ensures the internal consistency of the accounts. Consistency is obtained for the tables at current prices, in previous-period prices, and in prices of the fixed reference period of the national accounts.

The quarterly estimates are consistent with the annual figures, with 1975 as the reference period, given that the quarterly and annual series are matched. In the compilation of the quarterly accounts with the new 1993 reference period, which will be disseminated at the end of this year, an appropriate benchmarking technique will be used. The pertinent tests have already been carried out.

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

The new series has been disseminated on the BCE's Web page, covering only the 1993–97 period, but will soon be extended up to 2001. A consistent series with 1975 as the reference period has been available since 1965. There are plans to retropolate the new series to 1965.

The quarterly and annual estimates, both with 1975 as the reference year, are consistent with each other, given that the quarterly and annual series are matched. For estimating the quarterly accounts, 1993 base, which will be available at the end of this year, an appropriate

benchmarking technique will be used, for which the pertinent tests have already been conducted.

When a new series is being disseminated, it is necessary to inform users of the changes made and the reasons for differences between the new data and the data in the previous series. The National Accounts Unit is preparing a methodological publication on the new quarterly series with 1993 as the reference period, for dissemination at year-end. Similar action will be taken with respect to the annual series, upon dissemination of the retropolation results, when explanations will be given about the changes that can be observed between the new and the previous series.

As regards the quarterly series, three publications have been prepared to date, covering various methodological issues. Similar action was taken when the new annual series was first disseminated. These will be published in the BCE's *Cuadernos de Trabajo* series.

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

The national accounts statistics are consistent with the balance of payments statistics. In light of the conceptual harmonization of these statistical frameworks, the balance of payments data are used to construct the rest of the world account. However, the accounting records may well be more formal than effective, as the data on the rest of the world account are, in this case, not estimated separately. There is an exception with the estimation of unrecorded foreign trade, now reported in both statistical systems and therefore with no discrepancies. However, conceptual or empirical errors in the balance of payments or in the above-mentioned estimates will affect the quality of both systems.

The national accounts statistics are also consistent with the government finance statistics, but government revenue in the national accounts is recorded on a cash rather than an accrual basis, because government finance statistics are produced on that basis. At any rate, it is noteworthy that many past differences between these statistical frameworks with no conceptual justification have been eliminated.

4.4 Revision policy and practice

4.4.1 Revisions follow a regular, well-established, and transparent schedule.

There is a schedule for disseminating three versions of the annual series: one, provisional; another, semifinal; and the third, final. These versions are compiled with increasing quality and volume of basic data. For the provisional figures, data are used from the budgets of public entities and from preliminary and partial estimates. For the previous year (in which there is a provisional version), the basic data are of better quantity and quality, and work is done with budget execution data and a higher percentage of reporting institutions; the estimates therefore give a better idea of the facts. And last, when the final figures are being compiled, virtually all the basic data that can be obtained will already be in hand. This

explains why there are three versions every year: the n-1 accounts in a provisional version, the n-2 accounts in a semifinal version, and the n-3 accounts in a final version.

4.4.2 Preliminary data are clearly identified.

The three versions are clearly identified on the BCE's Web page and in its publications.

4.4.3 Studies and analyses of revisions are made public.

Users are not formally informed of the reasons for changes, but most users understand the tradeoff between timeliness and accuracy, and that the bulk of the changes from one version to the next are made for the above-mentioned reasons. There are also users who request and receive explanations.

5. Accessibility

5.1 Data accessibility

Statistics are presented clearly and are produced with absolute impartiality.

With a view to presenting a full series of accounts with 1993 as the reference period, the BCE plans to carry out a campaign to disseminate the results and methodological aspects among the various users, including ministries, universities, production houses, international agencies and representative offices, research centers, etc.

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 BCE publishes annual and quarterly statistics including through posting on its web page. Tables and charts are also published. Plans are under way for the publication of a 1993–2001 time series of annual accounts in September, with statistics on goods and services, institutional sectors, supply and use tables, integrated economic accounts, and derived tables.

In publications on the national accounts, time series are presented for the annual and quarterly accounts. In the case of the latter, comments are included in the reference quarter. Data on the quarterly accounts are published in values that are not seasonally adjusted.

5.1.2 Dissemination media and formats are adequate.

Annual and quarterly statistics are disseminated by various media, and users are informed that they can obtain time series covering longer periods, free of charge at the BCE's national accounts offices.

5.1.3 Statistics are released on a pre-announced schedule.

At the beginning of each year, a schedule is announced for data dissemination on the BCE's Web page.

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

National accounts data are released at the same time to all users, on the dates set for their release.

5.1.5 Nonpublished (but nonconfidential) subaggregates are made available upon request.

Nonpublished detailed data are provided on request by users, provided they are not confidential.

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 subset of metadata subject to SDDS requirements have been disseminated on the DSBB. Other selected metadata are available through the series *Cuadernos de Trabajo*, and in official documents that may be requested at the BCE. However, no comprehensive and detailed metadata on sources and methods used in the compilation of the national accounts aggregates are easily and readily available to users.

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

Metadata with exhaustive detail to meet the needs of specific user groups are not available, nor have they been requested.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized.

Prompt and knowledgeable support is provided to users of the statistics. In all the statistical releases, specific individuals are identified for possible user contacts by regular mail, telephone, facsimile, or electronic mail.

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

There is a catalogue of publications, documents, and other services to users, which is disseminated early each year on the Web page. The catalogue contains the schedule of

publications and the cost of obtaining them. The procedure is also indicated for obtaining such publications when payment is required.

Table 1. Ecuador: Data Quality Assessment Framework: Summary Presentation of National Accounts

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
0. Prerequisites						
0.1 Legal and institutional environment			X			The legal framework gives rise to the possibility of duplication of responsibilities. This risk has increased following the establishment of a national accounts unit in the MEF. Staff reductions in the BCE very considerably weakened capacity to compile national accounts in the midst of the transition to the <i>1993 SNA</i> .
0.2 Resources			X			
0.3 Quality awareness		X				
1. Integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical Standards		X				
2. Methodological Soundness						
2.1 Concepts and definitions		X				The classification of individual household consumption by purpose (COICOP) recommended by the <i>1993 SNA</i> is not used. Government revenue is recorded on a cash basis rather than an accrual basis. There is as yet no estimation of national accounts series denominated in U.S. dollars, the new legal tender.
2.2 Scope		X				
2.3 Classification/sectorization			X			
2.4 Basis for recording			X			
3. Accuracy and reliability						
3.1 Source data			X			Insufficient source data (agricultural prices, construction activities, trade, and other services). Studies and analyses of revisions are carried out only when there is a change in the reference period.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate and final output data		X				
3.5 Revision studies			X			

Table 1. Ecuador: Data Quality Assessment Framework: Summary Presentation of National Accounts

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
4. Serviceability						
4.1 Relevance		X				The reasons for revisions of the different versions of the annual accounts are not publicized. The revisions policy is not disseminated.
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice			X			
5. Accessibility						
5.1 Data accessibility		X				There are no detailed metadata easily accessible to users, except SDDS metadata for quarterly accounts.
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				

Note: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not-observed; NO = Practice Non-observed.
 Comment: Only if different from O.

II. CONSUMER PRICE INDEX

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The consumer price index (CPI) is compiled and disseminated by the INEC, and is denominated urban consumer price index (U-CPI) because of its geographical coverage. The legal basis for the activities of the INEC is described in the Statistics Law, established by decree of April 27, 1976, and published in the Official Gazette (*Diario Oficial de la República*) of May 7, 1976. The Law assigns to the INEC the role of regulator of the national statistics system, making the INEC responsible, under its Article 10, for “submitting national statistics programs to the National Council of Statistics and Censuses for consideration” and in “coordinating and supervising implementation of the work programs and plans for which the other institutions of the national statistics system are responsible.” The Law does not explicitly assign responsibility for compilation of the CPI but implicitly authorizes the INEC to produce statistics of any type subject to the approval of the National Council of Statistics and Censuses (CONEC). It must be pointed out that in practice, the CONEC meets only rarely, and more specifically on the occasion of the population and housing censuses. More recent legislation, such as the Organic Law on Consumer Protection, approved by the National Congress on July 4, 2000, specifically entrusts to the INEC, in its Article 52, the compilation of the consumer price index.

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

The INEC collects and processes all the data necessary for compilation of the CPI, and there are no other entities involved in its compilation.

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

The Statistics Law and other legislation clearly establish the confidentiality of data provided by respondents. The Statistics Law indicates in its Article 21 the confidentiality with which the data provided by reporting entities must be treated, as follows: “individual data obtained for the purposes of statistics and censuses shall be restricted; as a result, no disclosure is allowed of individual data of any type; nor may such data be used for any other purposes, such as taxation, conscription, or judicial investigation or, in general, for any purpose other than the strictly statistical or related with censuses.” Article 25 of said Law describes the punishment to which violators are subject as “the penalties set forth in the Civil Service and Administrative Careers Law.” A more recent legal provision contained in the INEC Staff Rules and Regulations established by Resolution 005-2002 issued on January 15, 2002, regulates the proper and confidential use of statistical data by INEC officials and staff members.

Data for compilation of the U-CPI are collected by means of direct interviews with providers of goods and services, with the use of a form by the enumerator. During the initial interview, the reporting entity is given an INEC card on which there is information on the rights and duties of reporting entities. This information is also repeated during routine interviews, whenever necessary. The forms used in INEC surveys, such as the national survey of urban household expenditure and income explicitly highlight the confidentiality of the data requested.

Current INEC procedures are generally adequate for the protection of data obtained for compilation of the U-CPI. The forms are kept for a period of five years at the INEC's offices, which are safeguarded to prevent access to them by persons from outside the institution. The documents are then transferred to the INEC's archives, where they are retained for a further period of 10 years, after which they are destroyed. Only staff members involved in compilation of the index have access to the data, and the electronic databases in which they are stored are protected by access codes.

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

The requirement to provide data to the INEC is based on the Statistics Law, Article 20 of which states that all individuals and legal entities, without any exception, shall be required to supply data for statistical purposes. Even though the Law provides for penalties to be imposed on violators, consisting of 10-30 days' imprisonment and fines, the penalties have not been updated and are still extremely lenient. However, in practice, reporting entities are very cooperative in providing data, and it has therefore been unnecessary to take punitive actions.

The INEC helps reporting entities complete the forms when necessary. In the collection of price data, account is taken of the workload and business hours of the reporting entities concerned; this means that simple forms are used, and the availability of the reporting entity is taken into account when an interview is being scheduled.

0.2 Resources

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

Sufficient staff members are assigned to compilation of the U-CPI. There are currently 37 persons working in the Urban Consumer Price Index Division. Of these, 26 are interviewers, spread among the INEC's four regional offices. In each regional office, there is also a project coordinator. At the INEC's central office, there are seven persons working in the division, consisting of the chief, two price analysts, a computer analyst, and three computer operators.

Staff members are well trained to compile and analyze the CPI. They participate in professional training courses abroad such as those made available in Spain, and in technicians' meetings such as those organized in the context of the Andean Community for CPI harmonization among community member countries. Work stability exists, and this ensures the adequate gaining of experience by staff members assigned to compilation of the index. Some of them have been working in this area for about 20 years.

The INEC's central and regional offices all have sufficient computer equipment for processing of the CPI. The computer system is part of a local network, and this facilitates the efficient, timely electronic transmission of data between the regional offices and the central office. The computer system for compiling the U-CPI is set up on a database in FoxPro 2.5 and is designed to perform automatically all the calculations needed for compiling the index.

The financial resources available for compiling the U-CPI are adequate. The maintenance and operation of the U-CPI compilation project has been financed largely with resources provided by the Central Bank of Ecuador (BCE), based on an assistance and reciprocity agreement signed on June 4, 1980, annual reciprocity agreements signed, starting from 1990, and currently, starting from 1993, on annual agreements renewable for further one-year periods, subject to prior approval of the budget and work schedule by the BCE.

The INEC has plans for updating the U-CPI, with the implementation of a new household income and expenditure survey, scheduled to begin in the second half of this year. For these purposes, resources have been earmarked from an Inter-American Development Bank (IDB) loan.

0.2.2 Measures to ensure efficient use of resources are implemented.

The INEC employs various procedures to ensure efficient use of the available resources. Efficiency is heightened through use of the same concepts in the household income and expenditure surveys and in U-CPI compilation. Regional and national field supervision missions are carried out every month, for the purpose of strengthening training and solving on site any operational and methodological problems arising. Statistical procedures are managed in such a way as to reduce errors in both the collection and the entry of the primary data, as well as in the various subsequent phases of index compilation, based on intensive use of available data processing resources. In addition, the INEC organizes national meetings every year for methodological, technical, operational, and budgetary assessment of the U-CPI project; the most recent meeting of this sort was held in Guayaquil, March 6-8, 2002. The efficient use of the available financial resources is also ensured by means of project expenditure reviews (audits) carried out under the financing agreements signed with the BCE and the external and internal audits conducted by the Office of the State Controller-General. Resources for financing new data priorities are obtained through negotiations and agreements prior to their inclusion in the annual project budgets.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality.

The INEC is keenly aware of the importance of ensuring the quality of its products to encourage the confidence of the user public, and the institution's executives take preventive and remedial steps to ensure that the U-CPI data are reliable, timely, and user-friendly. Negotiations are under way for international advisory assistance to meet the requirements for obtaining ISO 9000 certification.

0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics.

In practice, the INEC has procedures to ensure the quality of the U-CPI in its various phases of data collection and processing. Price collection is supervised at the regional and national levels, and any problems detected in the collection phase are brought to the attention of the national project coordination unit in the central office, for resolution. Price data are entered and debugged at both the regional and central levels, so that they can be crosschecked and corrected when necessary. Similarly, the data processing system provides a series of lists that allow for revision and validation of the index in its various phases of compilation (for instance, the average prices of individual articles are analyzed, as well as the subindices). The index results are examined at various levels of management within the institution before their release. These procedures are standardized in the "Operational Rules on Activities in the Urban Consumer Price Index Investigative Process," Resolution 011 of the INEC Director-General, issued in 1993.

Although the INEC conducted a survey of statistics users in 1994 to determine the reliability and level of acceptance of this indicator in public opinion, no further surveys of this type were carried out. Meetings are also often held with the press and universities to discuss aspects of the quality of the index.

0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.

In light of the importance of the indicator, it is also calculated weekly for the exclusive use of the authorities. The monthly index released to the public, is generally very timely, without any deterioration in quality; this is evidenced by the fact that the figures, which are presented as provisional for three months after their release, have only once needed revision. Adherence to the above-mentioned Operational Rules ensure accuracy and timeliness.

Contractually, the INEC is required to hold quarterly meetings with the BCE to inform it of any methodological processes and changes. The opinions expressed by the BCE at these meetings are taken into account. Other users express their opinions at frequent meetings organized by the INEC throughout the country, with universities, journalists, and chambers of commerce.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis

The Statistics Law gives full technical, economic, and administrative independence to the INEC. The INEC is an autonomous state institution with its own legal personality. The Statistics Law also identifies the INEC as the regulator of the national statistics system, and its activities are therefore not subject to outside interference. In the specific case of the U-CPI, there are INEC staff rules and regulations that govern the procedures for compiling and disseminating the index. These rules and regulations also specify that decisions on the release of the data fall within the purview of the INEC Director-General, subject to an internal technical assessment of the results.

Personnel recruitment and promotions are based on professional merit and are governed by the Civil Service and Administrative Careers Law and by the Staff Rules and Regulations of the INEC's Human Resources Administration. The INEC encourages the preparation of papers on methodology by its staff members, and these are generally circulated within the institution. Whenever these papers are to be published, the approval of the institution's management is required.

1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.

Choices of data sources and statistical techniques for index compilation are informed solely by technical considerations. These decisions are taken internally, largely on the basis of internal discussions held with broad staff participation in meetings at which papers are presented and comments are made on international experiences.

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

The INEC responds to erroneous interpretations of the U-CPI, as necessary, through media releases and interviews granted by its Director-General. The releases distributed at monthly press conferences contain brief comments on the results.

1.2 Transparency

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

Terms and conditions are available to the public, albeit not readily so. The Statistics Law is a public document and printed copies of this Law are available at the INEC library. The Law is

also available to the public on the BCE's Web site. However, the Law is not mentioned in the printed publications of the INEC; nor is it available on the INEC's Web site. All INEC publications contain information about the addresses of its regional and central offices, at which further information can be obtained.

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

Weekly U-CPI data are prepared for restricted distribution, for the sole use of the government authorities. The public becomes learns of these weekly data through press conferences. In contrast, the monthly index is announced simultaneously to all users at a press conference given by the INEC Director-General, who approves its release subject to prior internal technical assessment of the results. A few days after a press conference, results are posted on the INEC's Web site and then in the *Boletín Mensual del IPCU*.

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

All INEC publications identify the institution as the producer of the data in question. They also bear the institution's logo. When other institutions use data produced by the INEC, they are required to state that the data source is the INEC, which prohibits the total or partial reproduction of its products without its explicit permission.

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

The only substantial changes in methodology and in source data take place on the occasion of changes in the index base, and this has happened very rarely to date. Major changes in methodology are known in advance by the principal statistics users through consultation meetings on the conceptual and methodological aspects of base changes, but these changes are not announced in advance to the general public.

1.3 Ethical standards

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

INEC staff members are subject to the rules of conduct established in the Statistics Law, the Civil Service and Administrative Careers Law, and the INEC's Regulations. Accordingly, the Staff Rules and Regulations of the Human Resources Administration, issued on November 27, 1996, explicitly spell out the rights and duties of staff members of the institution. In addition, in January 2002 rules were issued "governing the proper and confidential use of statistical data by INEC officials and staff." Staff members are informed of the existence of these rules of conduct when they enter the institution and are reminded of them from time to time.

2. Methodological soundness

2.1 Concepts and definitions

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

The concepts and definitions used in U-CPI compilation generally follow international good practices and recommendations. The definition of household consumption expenditure and the product specifications used are in conformity with international recommendations. The goods and services for which prices are collected periodically are clearly specified.

The U-CPI weights are based on the National Urban Household Income and Expenditure Survey (ENIGHU), carried out during the period September 1994–August 1995. The definition of household expenditure used in this survey is in conformity with the *1968 SNA*, which provided the international recommendations that were in force when the survey was being designed and implemented. The concept of expenditure in this survey is that of monetary expenditure, a concept contained in the international recommendations for the compilation of consumer price indices that were in force when the survey was being implemented. It is noteworthy that this concept of household consumption expenditure has not been widely adopted, and that preference has been given in many countries to the concept of acquired consumption, which is consistent with that used in the national accounts. The new manual for the compilation of consumer price indices, of which drafts are available, recommends the use of the concept of acquired consumption.

2.2 Scope

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

The U-CPI covers the national urban population, except for households located in urban centers with less than 5,000 inhabitants and in the Amazon and insular regions (because of problems of logistics and low population density). The index covers about 70 percent of the country's 1994–95 total urban population. The index does not cover the decile of the population with the highest income. It covers purchases of goods and market services, the self-consumption of own-account produced goods, and remuneration in kind. The two latter components are covered even though they do not correspond to the concept of monetary expenditure used in U-CPI compilation, for practical, nonconceptual reasons. Consistently with the concept of monetary expenditure, U-CPI weights are not established on the basis of estimates provided by the ENIGHU of rents imputed to owner-occupied dwellings, but monetary expenditure was included in the acquisition of housing in addition to actual expenditure on rentals. Specifically, expenditure on actual rents and on housing purchases was included in this item (cash payments and housing loan repayments), in addition to expenditure on housing maintenance, repair, and improvement. The scope of the U-CPI is defined in the methodological paper, "U-CPI Methodology," which was distributed to

interested users on request and in the paper, “The Change in the Urban Consumer Price Index Base,” of June 1996.

2.3 Classification/sectorization

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

The household concept corresponds to the one used in the national accounts, in accordance with international practices. The classification of the goods and services in the U-CPI corresponds to the COICOP, pursuant to international recommendations.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The consumption expenditure used in the U-CPI weights is valued at purchasers’ prices, that is prices that include distribution margins and taxes on the products in question, in accordance with the valuation principles of the *1993 SNA*.

The product specifications used contain a precise, complete description of their nature and characteristics. Only cash prices are collected.

2.4.2 Recording is done on an accrual basis.

The prices used are market prices as at the time of transactions, in accordance with the principle of accrual-basis recording recommended in the *1993 SNA*.

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

In the U-CPI, sales of durable goods such as automobiles are not netted off by purchases, therefore the weights attributed to these products would be overvalued. The ENIGHU did not allow for the identification of purchases of new goods separately from those of used goods, or sales of durable goods by households. Also, the concept of expenditure for these goods and for the acquisition of housing is not an accrual concept of expenditure but corresponds to the payments made during the period, whether as actual payment for the acquisition of the goods in question during the period or repayments or part payments for goods purchased on credit during the period or in previous periods.

3. Accuracy and reliability

3.1 Source data

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

The sample frame for the 1994–95 ENIGHU was based on the 1990 population and housing census and its updates. The INEC has a directory of establishments by economic activity, which is updated annually but which includes only establishments employing 10 or more persons. This directory is of limited use for choosing reporting business establishments for U-CPI purposes because of the existence of a large number of small establishments. Establishments reporting for periodic price surveys are the same as those reporting for the U-CPI with the previous base (May 1978–April 1979) plus additions.

There is no regular program of household income and expenditure surveys. These are conducted at irregular intervals when the obsolescence of the U-CPI weights convinces the authorities of the need to provide resources for such investigation. As mentioned above, the two most recent surveys are those carried out in 1978–79 and 1994–95, but steps will soon be taken to begin a new survey in the second half of this year, which would mean a significant improvement in the frequency of such investigations.

The 1994–95 ENIGHU covered more than 70 percent of the urban population, including all households of the population under study, whatever their size or socioeconomic characteristics (the U-CPI subject of study is only the middle-income and low-income urban population). For this survey, random sampling methods were used. A stratified, multiphased sample design was used. In auto-represented cities (six, representing some 61 percent of the urban population under study), primary units (censal sectors) were selected with probability proportional to size, and final sample units (dwellings) were selected with equal probability. For the other cities, yet another phase was added, consisting of the selection of cities with probability proportional to their average size, depending on the number of censal sectors involved. The total sample included 11,232 dwellings. The investigation was carried out over 12 months, included in the survey reference period. The details provided in the survey results were sufficient to meet the needs of the CPI.

The frequency of price collection is adjusted to match the frequency of index compilation, for which the criterion considered was the frequency of purchases and the dynamics in product price variations. Weekly, biweekly, monthly, half-yearly, and special periodicities are thus established for price collection of different articles. Prices are collected in 12 cities (the same covered by the EIGHU sample), including the six most populous cities in the country and six other cities representing the remaining urban areas under study.

The products included in the basket were selected deterministically, based on the relative share of the selected products in total household expenditure. In all, the basket is made up of products in 197 categories, covering approximately 90 percent of household consumption

expenditure. All the articles which represented over 1 percent of the household consumption expenditures are included in the index basket.

Reporting establishments for price surveys were also selected on a nonrandom basis, taking into consideration the most frequent purchase locations of households and the availability of the goods in the basket. In all, the sample contains 6,982 establishments. For rentals, there is a probabilistic sample of households, composed of six monthly subsamples, each made up of close to 400 households.

Price data are obtained directly from the establishments in question through visits by interviewers using purchase and research methods. Data are obtained on about 11,700 monthly price listings. The specifications are detailed enough to ensure price consistency over time and among establishments. In cases where a reporting entity does not respond, the average of the prices provided by other reporting entities for the same variety is recorded. This procedure is less effective than that of recording any price change observed for the variety in question at the price reported the previous month by the reporting entity in default.

There are no procedures for carrying out ad hoc surveys that supplement the periodic price surveys. However, inquiries are conducted partly to improve subbaskets with the introduction of further specifications.

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

The source data for establishing weights and prices reasonably meet the U-CPI requirements. The level of detail of the EIGHU by product provided data at the six-digit level of the classification used, consistent at the two-digit level with the classification of household consumption expenditure in the national accounts (1968 SNA), which was reclassified in accordance with the COICOP for PPI purposes.

3.1.3 Source data are timely.

Price data are received in timely fashion. The INEC is self-sufficient in the collection of prices, and prices from other statistical systems are not used.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques.

Goods and services in the EIGHU are recorded at the six-digit level of the classification used, consistent with the definition of household consumption expenditure in the 1968 SNA.

CPI weights are generally consistent with household consumption expenditure as defined in the 1993 SNA, apart from the exceptions mentioned above with respect to housing and

durable consumer goods. Household own-consumption of goods is marginal and appears to be valued at cost.

The index is calculated for 197 articles, arranged in 57 subgroups, 27 groups, 10 aggregates, and the total, based on the COICOP. The index is calculated for each of the 12 cities in which the price survey is conducted, at both the regional (Costa and Sierra) and national levels. For individual articles, the indices are calculated as the short-term rates of change of average prices (ratio of simple price averages for the current month to those for the previous month). At the subsequent levels of aggregation, the indices are calculated using the modified Laspeyres formula. The reference period for prices and weights coincides and corresponds with September 1994-August 1995. The link with the previous U-CPI series with 1978–79 as the base year was established in June 1996, when calculations of the two indices overlap.

The aggregation of the indices by city at the level of the national index is made for each of the elementary indices (articles) using the relative share of each city in the national expenditure on the article in question. The national indices by article are aggregated at the higher levels using the share of each such article in total national expenditure.

When a price is unavailable from a reporting entity, the average of the prices obtained from the other reporting entities for the same article is recorded, which is not an optimal method. If data are not obtained for an article because of its temporary disappearance from the market, the price recorded is that obtained by extrapolation from the latest price observed with the rate of change observed in the average prices of the other articles included in the same subgroup. There are no seasonal products included in the U-CPI basket.

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

No adjustments are made to expenditure data for possible undervaluation in the ENIGHU.

3.3 Assessment and validation of source data

3.3.1 Source data

The EIGHU provided estimates of sample errors at various aggregation levels of consumer expenditures. The individual prices reported are checked for consistency over time and crosschecked with the prices obtained from other reporting entities during the period. Prices showing significant fluctuations are subject to confirmation and explanation by reporting entities. The prices of agricultural products are compared with those obtained by the Ministry of Agriculture and Livestock (MAG).

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable.

U-CPI data are routinely compared with producer price index (PPI) prices for 50 comparable products.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Significant fluctuations in the indices are assessed at various levels of compilation.

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

Because of the method of aggregation used, there are no discrepancies between the national index estimated by product and the index obtained by weighting of the indices for cities and regions.

3.5 Revision studies

3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

In practice, the U-CPI is not revised except when the base year is changed. On such occasions, comprehensive studies are done of the index sources and methods.

4. Serviceability

4.1 Relevance

4.1.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

The INEC has not set up any system (such as user surveys) to collect users' opinions routinely on the usefulness of the statistics. However, there are various channels through which users can express their opinions, as occurs during the occasional meetings held with the universities, the press, and producer chambers. In addition, the INEC holds quarterly consultation meetings with the BCE to discuss methodological and operational aspects of U-CPI compilation.

The INEC's index compilation technicians keep abreast of methodological developments by attending international statistics meetings, seminars, and courses related to the topics of household surveys and poverty and to price indices.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards.

The U-CPI is released on the last business day of the reference month, thus exceeding SDDS timeliness requirements. In special cases, the INEC has taken steps to ensure a continuous and timely flow of data, as in the case of public utility enterprises.

4.2.2 Periodicity follows dissemination standards.

The periodicity of the U-CPI is monthly, as required under the SDDS.

4.3 Consistency

4.3.1 Statistics are consistent with the dataset to which they belong (e.g., accounting identities are observed).

The U-CPI maintains internal consistency. The aggregate indices are the same, whether aggregation is carried out by product or by geographical region.

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

U-CPI series are consistent for reasonably long periods. The current monthly series with 1994–95 as base year is available from June 1996. The index was compiled with 1994–95 as the base year and with the previous base for the same month in June 1996; this facilitated the calculation of linkage factors for the construction of time series covering longer periods. These linkage factors are released to facilitate user access to the data. U-CPI releases contain brief commentaries explaining changes in the index.

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

U-CPI data are compared with the PPIs for comparable items and with the agricultural producer prices collected by the MAG.

4.4 Revision policy and practice

4.4.1 Revisions follow a regular, well-established, and transparent schedule.

There is no specific revision policy with respect to changes in the index base. Periodic data, for their part, are released in preliminary form for three months.

4.4.2 Preliminary data are clearly identified.

The data released are identified as preliminary for three months. In practice, there have been no revisions of the indices, apart from once.

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

Only when there is a change in the index base is the public informed at a press conference of the changes introduced. Explanatory notes are included in the pertinent press release. Detailed documentation on any methodological revision is available only for internal use.

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).

In the monthly publication, Boletín del Índice de Precios al Consumidor [Consumer Price Index Bulletin], the INEC presents extended time series every month, only for the general index. Detailed data for groups and higher aggregates are presented only for the four most recent months, at the national and regional levels, and by city: Cuenca, Guayaquil, and Quito. Data for the 10 higher aggregates by region and for three cities covered in the monthly series that began in 1996 are posted on the BCE's Web site in Boletín de Precios, Salarios y Empleo [Bulletin of Prices, Wages, and Employment].

5.1.2 Dissemination media and formats are adequate.

Data are disseminated first at a press conference given by the INEC and five days later, on the institution's Web site. The BCE posts the data on its Web site on the same day as that of the press conference. The INEC's printed release is distributed 15 days after the initial dissemination of the index. The more extended time series can be consulted at the institution's library.

5.1.3 Statistics are released on a pre-announced schedule.

The U-CPI is released by the INEC according to a dissemination plan prepared by mid-December, which specifies dates and times for press conferences to be held in the following year, pursuant to Article 13 of the "Operational Rules on Activities in the Urban Consumer Price Index Investigative Process." This schedule is not announced to the public by INEC, but the BCE's pre-announced schedule for dissemination of the U-CPI is released in conformity with SDDS requirements.

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

Statistics are disseminated at the same time to all users, by press conference on the last business day of the reference month.

5.1.5 Nonpublished (but nonconfidential) subaggregates are made available upon request.

Additional subaggregates are available to users at the INEC's library, upon request. The pertinent publications provide the addresses and telephone numbers where data on the index can be requested but do not indicate on what conditions. In fact, special tables requested are provided to users at a cost.

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.

All of the INEC publications on the U-CPI contain a brief methodological description of very limited scope. A more comprehensive paper on methodology has been distributed only upon request. The existence of this paper has not been announced to the public in catalogues or on the INEC's Web site. Although somewhat broader in scope than the methodological notes included in publications, the scope of this paper is also limited; for instance, it lacks information such as the response rate in surveys, the possible biases in the estimates, and deviations from international practices.

The base page of the metadata disseminated on the IMF's electronic bulletin board for Ecuador's U-CPI mentions that a paper on methodology was published before the release of the index with 1994–95 as the base year, in the *Boletín de Precios al Consumidor del Area Urbana* [Bulletin of Consumer Prices in Urban Areas] of August 1996, No. 173. Mention is also made here of the contact name and telephone number for obtaining the paper. It is noteworthy that the above-mentioned bulletin was the first to publish data on the indices with the new base, and the methodological description, which is limited, is included as an integral part of all the monthly publications that have succeeded it to date.

The U-CPI methodology in the SDDS is updated.

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

The INEC makes available to users brochures on the U-CPI that help them understand this indicator. The INEC prepares easily comprehensible papers on methodology that it distributes to the journalists covering its press conferences. Specialized researchers have access to further details on the methodology used.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized.

The INEC's policy is not to personalize responsibilities in the area of assistance to users. However, mention is made in its publications of the technical staff responsible for the project and the electronic and nonelectronic mailing addresses to which users can apply for data. The names of the contact persons are mentioned on the BCE's Web site.

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

The INEC's Directorate of Statistics Dissemination makes available to the public up-to-date catalogues of publications in hardcopy and on its web site. These catalogues show the frequency of issue and the respective costs for acquisition by the public in hardcopy and on magnetic media, within the country and abroad, and availability on the Internet. Prices are published in the monthly bulletin with the data, including information on subscriptions. These releases do not include lists of all the institution's publications.

Table 2. Ecuador: Data Quality Assessment Framework: Summary Presentation of .Consumer Price Index

Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
0. Prerequisites						
0.1 Legal and institutional environment		x				
0.2 Resources		x				
0.3 Quality awareness		x				
1. Integrity						
1.1 Professionalism		x				The terms and conditions under which statistics are produced are available to the public, albeit not readily so. Reference to these terms and conditions is not included in publications. Major methodological changes are not announced in advance to the general public.
1.2 Transparency			x			
1.3 Ethical Standards		x				
2. Methodological Soundness						
2.1 Concepts and definitions		x				The scope is not completely consistent with the concept of monetary expenditure.
2.2 Scope			x			
2.3 Classification/sectorization		x				Only prices are on an accrual basis. Expenditure for weights corresponds to payments. Sales are netted from purchases.
2.4 Basis for recording			x			
3. Accuracy and reliability						
3.1 Source data			x			There is no regular program of income and expenditure surveys (the frequency is more than every five years). There is no adequate directory of commercial establishments.
3.2 Statistical techniques		x				
3.3 Assessment and validation of source data		x				
3.4 Assessment and validation of intermediate and final output data		x				
3.5 Revision studies		x				
4. Serviceability						
4.1 Relevance			x			No regular consultation with private users.
4.2 Timeliness and periodicity		x				There is no program of regular updates of the base of the index.
4.3 Consistency		x				
4.4 Revisions policy & practice			x			
5. Accessibility						
5.1 Data accessibility		x				Methodology not widely published.
5.2 Metadata accessibility			x			
5.3 Assistance to users		x				

III. PRODUCER PRICE INDEX

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The producer price index (PPI) is compiled by the INEC. Ecuador's Statistics Law, established by Executive Decree 323 of April 27, 1976 and published in the Official Gazette, No. 82, of May 7, 1976, is the legal basis for the activities of the INEC as the producer of statistics. Article 1 of the Statistics Law states that "the national statistics shall be drawn up through the national statistics system under the responsibility of the bodies established in this Law." Article 4 of the Law identifies as bodies of the national statistics system, the National Council of Statistics and Censuses and the National Institute of Statistics and Censuses.

The Law assigns to the INEC the role of regulator of the national statistics system, and its Article 10 identifies the INEC as the body in the national statistics system responsible for "submitting national statistics programs to the National Council of Statistics and Censuses for consideration" and "coordinating and supervising implementation of the work programs and plans for which the other institutions of the national statistics system are responsible." Regarding statistics, the Law does not explicitly refer to the assignment of responsibility for compilation of the PPI but implicitly authorizes the INEC to produce statistics of any type subject to the approval of the National Council of Statistics and Censuses (CONEC). It must be pointed out that in practice, the CONEC meets only rarely, and more specifically on the occasion of the population and housing censuses. More recent legislation, such as the Organic Law on Consumer Protection, approved by the National Congress on July 4, 2000, specifically entrusts to the INEC, in its Article 52, the compilation of the producer price index.

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

The INEC is fully self-sufficient in the compilation of the PPI, collecting and processing all the necessary data. No other institutions are involved in the compilation of the index.

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

The Statistics Law clearly establishes the confidentiality of data received from the reporting entities. According to Article 21 of this Law, all data provided by reporting entities are strictly confidential and therefore individual data on persons and enterprises cannot be disclosed or used for the purposes of taxation or for any purpose other than the strictly statistical. When the INEC is conducting research, it informs reporting entities that the data they supply are confidential. Article 21 of the Law is reproduced on survey forms.

Various legal provisions relate to penalties to be imposed on any staff members disclosing confidential data. Article 25 of the Statistics Law describes the punishment to which violators are subject as “the penalties set forth in the Civil Service and Administrative Careers Law.” A more recent legal provision contained in the INEC Staff Rules and Regulations, established by Resolution 005-2002 issued on January 15, 2002, regulates the proper and confidential use of statistical data by INEC officials and staff members. PPI data are published only in the form of indices at the three-digit level of the Central Product Classification (CPC). Before their release, the data are reviewed to ensure that the rules of aggregation have been followed and so prevent the dissemination of confidential data established for survey publication.

Only persons directly involved in compilation of the index have access to individual data. The INEC’s current procedures are generally appropriate for ensuring the security of data obtained for compilation of the PPI. The forms are kept for a period of five years at the INEC’s offices to prevent access to them by persons from outside the institution. The documents are then transferred to the INEC’s archives, where they are retained for a further period of 10 years, after which they are destroyed. Only staff members involved in compilation of the index have access to the data, and the electronic databases in which they are stored are protected by access codes.

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

The requirement to provide data to the INEC is based on the Statistics Law, Article 20 of which states that all individuals and legal entities, without any exception, shall be required to supply data for statistical purposes. Although the Law makes violators subject to penalties (Art. 22) consisting of 10-30 days’ imprisonment and fines, the penalties have not been updated and are still extremely lenient. However, in practice, reporting entities are very cooperative in supplying data, and punitive action has therefore been unnecessary.

INEC interviewers help reporting entities complete the forms. In the collection of price data, account is taken of the workload of reporting entities. This means that the forms used are simple; only about 15 minutes are required to complete them.

The INEC encourages the voluntary cooperation of reporting entities. To this end, its field staff are trained to engage in a task of motivation, assisted by a letter signed by the INEC’s Director-General. They also provide reporting entities every quarter with a brochure explaining the indices and any changes made to them.

0.2 Resources

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

There are 31 persons working on compilation of the PPI, and this is deemed adequate. Staff members working on the PPI are appropriately trained for carrying out the tasks of

collection, supervision, processing, and analysis involved in compilation of the PPI. Two of the regional coordinators have participated in courses on indices in Spain, and the project chief has participated in pertinent international events. Every year, the INEC calls a meeting of all staff involved in compilation of the PPI for the purposes of reviewing the methodologies and research procedures used. The BCE also participates in these meetings, based on the existing contractual agreements between the two institutions. There is continuous on-the-job training of staff members, who have also been taught by international experts advising them on PPI compilation and assessment, as well as advisory assistance provided by the International Monetary Fund (IMF) in 1997 and 1998.

The computer hardware available for processing PPI data needs to be upgraded. For the processing of prices and the calculation of indices, there is a computer system provided by the IMF in FoxPro 2.5 and adapted by the INEC to meet current PPI needs. Migration has not yet taken place to a modern system for compiling and analyzing the series. However, in preparation for the publication of the monthly survey on the PPI, the Visual FoxPro, Excel, Word, and Power Point programs are used.

The number of computers available is limited. The INEC has one computer for each of the four regional offices, to be used for the input and validation of PPI data. At the central office, there are three computers for consolidating data and managing data files; processing price data; calculating, analyzing, validating, and assessing indices; and editing the publication of indices.

The financial resources devoted to the PPI are sufficient. These resources come from the INEC's current budget and from funds supplied under the agreement with the BCE. Additional financial resources to implement plans for improving the PPI have been earmarked under the institutional component of Inter-American Development Bank (IDB) Loan 1296 OC/EC. Plans are afoot to use these resources to improve the directory of reporting entities in agriculture and exporters for the PPI.

0.2.2 Measures to ensure efficient use of resources are implemented.

The INEC employs various procedures to ensure efficient use of the available resources. Efficiency is heightened through use of the same concepts and classifications of activities (ISIC, Rev. 3) and products (CPC) in the economic surveys and in PPI compilation. Regional and national field supervision missions are carried out every month for the purpose of strengthening training activities and solving on site any operational and methodological problems arising. Statistical procedures are managed in such a way as to keep to a minimum, errors in the collection and input of primary data, as well as in the various subsequent phases of index compilation, based on intensive use of the available data processing resources. In addition, the INEC organizes national meetings every year for methodological, technical, operational, and budgetary assessment of the PPI project. The efficient use of the available financial resources is also furthered by means of project expenditure reviews (audits) carried out under the financing agreements signed with the BCE and the external and internal audits conducted by the Office of the State Controller-General. Resources for financing new data

priorities are obtained through negotiations and agreements prior to their inclusion in the annual project budgets.

The INEC makes good use of the data processing resources available to it to save resources. The entire process of producing the index is automated. The computer platform is configured on a local network, and this allows for efficient interaction between the INEC's central administration and its regional offices. Data compiled by the INEC are disseminated on the INEC's Web site.

0.3 *Quality awareness*

0.3.1 Processes are in place to focus on quality.

The INEC is keenly aware of the importance of ensuring the quality of its products to encourage the confidence of the user public, and the institution's executives take preventive and remedial steps to ensure that the PPI data are reliable, timely, and user-friendly. Negotiations are under way for international advisory assistance to meet the requirements for obtaining ISO 9000 certification.

0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics.

In practice, the INEC has procedures to ensure the quality of the PPI in its various phases of data collection and processing. Price collection is supervised at the regional and national levels, and any problems detected in the collection phase are brought to the attention of the national project coordination unit in the central office, for resolution. Price data are entered and debugged at the regional level, from which they are sent on diskette with a copy of the pertinent forms to the central office. Similarly, the data processing system provides a series of lists that allow for revision and validation of the index in its various phases of compilation (for instance, changes in the prices of individual articles are analyzed, as well as the subindices). The index results are examined at various levels of management within the institution before their release. In its awareness of the need to preserve the quality of the PPI, the INEC has also used international technical assistance provided by the United Nations, the IMF, the European Community, and the French government's Technical Cooperation Department.

0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.

The policy of the INEC is to provide timely, quality service. In addition, under its agreement with the BCE, it is a requirement for PPI data to be submitted by electronic media by the 15th day of the month following the index reference period. The quality of the data produced is analyzed at quarterly meetings held with the BCE. Every month, the INEC's management requires the submission of reports on price survey coverage, so that it can assess the quality of the procedures employed and the results obtained. The INEC has plans to improve the index in future, based on an improvement of the directories, for which financial resources

have already been earmarked. The INEC maintains contact with the Ministry of Economy and Finance to analyze the behavior of the PPI and the comparative statistics related to the PPI and the U-CPI. Whenever the comparative statistics on these two indices are released, a letter is sent to the economic authorities requesting, in its first paragraph, opinions and recommendations on the analytical data.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis.

The Statistics Law gives full technical, economic, and administrative independence to the INEC. The INEC is an autonomous state institution with its own legal personality. The Statistics Law also identifies the INEC as the regulator of the national statistics system, and its activities are therefore not subject to outside interference.

Personnel recruitment and promotions are based on professional merit and are governed by the Civil Service and Administrative Careers Law and by the Staff Rules and Regulations of the INEC's Human Resources Administration. The INEC encourages the preparation of papers on methodology by its staff members, and these are generally circulated within the institution. Whenever these papers are to be published, the approval of the institution's management is required.

1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.

The compilation of price indices is informed solely by technical considerations. The professionals have full independence in choosing the sources and the methods and statistical techniques that they deem most appropriate for making estimates. The results are not subject to any influence, whether external or internal. The PPI methodology was assessed, at the request of the Central Bank of Ecuador, by the International Monetary Fund. The institution's professionalism is developed through internal meetings with all staff involved in compilation of the PPI at the national level to discuss the methods and procedures used for compilation of the index. In turn, the technicians participating in training events abroad are required to make presentations on their experiences and provide the training materials received at their courses to the INEC's library for consultation by their colleagues.

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

The INEC makes comments through media releases from its Director-General whenever its statistics are used for inappropriate purposes or are incorrectly interpreted. This procedure has not been required as regards the PPI.

1.2 Transparency

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

Terms and conditions are available to the public, albeit not readily so. The Statistics Law is a public document and printed copies of this Law are available at the INEC library. The Law is also available to the public on the BCE's Web site. However, the Law is not mentioned in the printed publications of the INEC; nor is it available on the INEC's Web site. All INEC publications cite the addresses of the INEC's central office and regional offices at which further information can be obtained. The INEC produces and disseminates a catalogue of publications.

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

No government authority has access to the data before they are released. The PPI is disseminated at the same time to all users.

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

All INEC publications identify the institution as the data producer. They also bear the institution's logo. When other institutions use data produced by the INEC, they are required to state that the data source is the INEC, which prohibits the total or partial reproduction of its products without its explicit permission.

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

The PPI is a relatively new product of the INEC that began with the publication in 1998 of the series starting with December 1997 data. Therefore, no methodological changes have as yet been introduced.

1.3 Ethical standards

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

INEC staff members are subject to the rules of conduct established in the Statistics Law, the Civil Service and Administrative Careers Law, and the INEC's Regulations. Accordingly, the Staff Rules and Regulations of the Human Resources Administration, issued on November 27, 1996, explicitly spell out the rights and duties of staff members of the institution. In addition, in January 2002 rules were issued "governing the proper and confidential use of statistical data by INEC officials and staff." Staff members are informed of the existence of these rules of conduct when they join the institution and are reminded of them from time to time.

2. Methodological soundness

2.1 Concepts and definitions

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

The PPI was designed with technical assistance from the Statistics Department of the International Monetary Fund. The conceptual framework for the design of the index is largely consistent with internationally accepted practices. The weights for the producer indices of manufacturing and mining are the sales of the establishments involved in those activities. In the case of agriculture and fishing, the weights used were estimates of the value of production of the activities in question during the base year, as sales data were unavailable.

The specifications of the goods covered in the price survey carried out for PPI purposes are in conformity with international standards. Precise product specifications contain all the characteristics of the product as well as of transactions, and in the case of manufacturing, the name of the establishment is part of the specification.

2.2 Scope

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

The PPI covers manufacturing, mining, agriculture, and fishing at the national level. The index covers all market production, whether for the domestic market or the external market. It does not cover small enterprises.

2.3 Classification/sectorization

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

The PPI is compiled by product and by industry. The classifications used are those recommended internationally. In the PPI, industries are thus classified using the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 3, and products are classified using the Central Product Classification (CPC).

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

In conformity with international recommendations, the sales values (production in the case of agriculture and fishing) used for the weights are the factory-gate market producer prices, that is, excluding the margins of distribution and taxes on the products. There is full conceptual

consistency between the prices collected in the price survey and the prices implicit in the valuation of PPI weights.

2.4.2 Recording is done on an accrual basis.

The sales values and the production used in the PPI weights are derived from the market prices at the time of recording of transactions. Similarly, the prices collected in the price survey correspond to the market prices for the transactions in question during the survey period.

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

Grossing and netting procedures are consistent with international standards. In conformity with the *System of National Accounts 1993*, transactions between establishments belonging to the same enterprise would be recorded in gross terms (the sales data used in weights would, in theory, include sales between establishments of the same enterprise).

3. Accuracy and reliability

3.1 Source data

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

The sample frame for the 1995 manufacturing and mining survey that served as the basis for the PPI weights is made up of establishments with 10 or more employees, derived from the 1980 manufacturing and mining census and occasional updates. In 1995 this directory listed 1,780 establishments.

The sample frame for farm production was made up of agricultural production based on the national survey on agricultural areas and production (ENSPA), which was used for product selection. The sample frame for the selection of agricultural products was constituted on the basis of a field procedure of identifying the largest establishments producing the goods in the PPI basket. The directory of fishing establishments was drawn up on the basis of a field procedure and administrative records, such as the directory of the National Fishing Institute, the directory of affiliates to the National Fishing Chamber, etc. The directory of fishing establishments included organized enterprises as well as those engaged in nonindustrial fishing.

The INEC conducts annual manufacturing and mining surveys. These surveys have satisfactory coverage, being representative at the national level of the production of manufacturing and mining establishments with 10 or more employees and responsible for about 75 percent of the production in question (as a percentage of the pertinent estimates in the national accounts).

The surveys are representative at the four-digit level of the ISIC, Rev 3. The breakdown by product has facilitated classification in accordance with the CPC at the five-digit level (plus two digits that follow a more ample breakdown by product in the surveys). However, these surveys do not use a random sample design; on the contrary, they are cut-off samples in which a selection was made of the largest establishments, covering 90 percent of the production of the population targeted by the surveys.

The samples for the periodic price surveys are also deterministic, as a selection was first made of the more important products for each of the activities covered by the PPI, and within them, the establishments with the largest share in the production of the goods in question. The selection method used could lead to biased price change estimates, assuming that the changes in question may have a different behavior in small enterprises which have limited representation in the surveys.

Adequate imputation methods are used for seasonal products and for other reasons when observed prices are unavailable. The computer program for calculating the PPI carries out such imputation based on changes in the prices of similar products in the pertinent subgroup.

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

Source data reasonably approximate PPI requirements for both the weights and the prices collected periodically.

3.1.3 Source data are timely.

Price data are collected every month; attempts are made to visit each establishment in the same week of the month. All the data are received in timely fashion, and the index is published within 15 days of the end of the reference month.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques.

The estimates of production and sales that serve as a basis for the selection of the PPI basket and its weights are amply broken down by product and by industry. The index by industry is compiled at the three-digit level of the ISIC, while the index by product is compiled at very detailed specification levels. The index is published only by product, at the three-digit level of the CPC.

In the calculation of the PPI, the Laspeyres formula was used, with 1995 as the fixed base. The manufacturing and mining elementary-level indices are estimated as the ratios of the prices observed during the current period to the average price for base year 1995. These elementary-level indices are aggregated to higher levels using base-year weights. For agricultural and fishing products, when various observations exist for subgeneric products (specifications), the index of each subgeneric product is estimated as the geometric mean of

the price ratios with respect to the base year. At higher levels of aggregation, base-year weights are applied. The general index is obtained by applying the weights of each of the industries derived from the 1995 national accounts.

The procedures for imputing missing prices are adequate. For temporarily missing varieties, changes in the prices of similar products (relative changes in prices) are recorded. Permanently unavailable varieties are replaced with similar products, and the base-period price is estimated, taking account of changes observed in the prices of similar products. The weight periods and base-period prices are the same (calendar year 1995), and it was therefore unnecessary to make alignment adjustments. As no change has as yet been made in the base, the problem of chaining is not relevant in PPI compilation.

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

It is not necessary to adjust the data collected for PPI compilation because they are consistent with the definitions, concepts, and classifications required for their compilation. The index basket remains fixed; no new products are included, but care is taken to maintain the index coverage by replacing specific products or reporting entities when the pertinent business is discontinued.

The coverage of the index of the economic sectors in its scope is satisfactory. As mentioned above, the index is representative at the national level of the production of establishments with 10 or more employees and covering approximately 75 percent of the manufacturing and mining production. A comprehensive estimation for these industries is their output deflator, derived from the national accounts. The index is fully representative of the agriculture and fishing sectors.

3.3 Assessment and validation of source data

3.3.1 Source data

Because they are based on cut-off sampling surveys, the estimates used in the PPI weights do not contain sample errors. In the price surveys, nonresponses are followed up, and the necessary measures are taken to correct them. The incidence of atypical values is controlled during the processes of data crosschecking and validation. Moreover, the INEC continuously updates the directories for the economic surveys, based on administrative records, which are coordinated with chambers of producers and public enterprises.

3.4 Assessment and validation of intermediate data and statistical outputs.

3.4.1 Main intermediate data are validated against other information where applicable.

Based on 50 products in common with the U-CPI, comparative studies of these two indices are carried out.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Any unusual changes in the index caused by particular sectors or reporting entities are analyzed and validated. These are explained in the brief analyses of the results posted on the INEC's Web site.

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

Discrepancies between the PPI by product and by industry are investigated at the aggregate level, even though such discrepancies are, in practice, not significant. Users are not notified of such discrepancies, as only the index by product is disseminated.

3.5 Revision studies

3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

PPI data have not been revised for prices or changes in the base. Revision studies are therefore not pertinent.

4. Serviceability

4.1 Relevance

4.1.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

The INEC has not set up any system to consult with users on the usefulness of the PPI statistics. However, it meets with the MEF, the BCE, and universities to improve on the approaches to making comparisons between the PPI and the U-CPI. At such meetings, it also collects opinions from these users regarding the usefulness of the PPI. Staff members compiling the index occasionally participate in seminars organized by the European Center for Statistics and Development (CESD-Madrid) and in meetings sponsored by the Andean Community (CAN).

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards.

PPI statistics are published in timely fashion within 15 days of the end of the reference month, which surpasses timeliness requirements under the SDDS.

4.2.2 Periodicity follows dissemination standards.

The periodicity of PPI compilation and dissemination is monthly, in conformity with the requirements under the SDDS.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset.

The PPI is compiled by product and by branch of economic activity. Estimates by product are preferred and are the only ones officially disseminated. There are negligible differences between the index calculated by product and that calculated by industry. These differences are analyzed.

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

The PPI series are consistent over time. The PPI is a relatively new indicator, the publication of which began in 1998. No methodological change has been introduced since the beginning of the series. There is a series of monthly indices consistent with the data produced from December 1997. PPI releases are not accompanied by any analytical text, and therefore no explanations are provided to users on expected changes in trends in INEC publications. Changes in trends are analyzed internally at the INEC to validate the data before their release.

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

PPI consistency is analyzed by comparison with pertinent indices, such as the U-CPI, and changes in agricultural product prices collected by the Ministry of Agriculture and Livestock (MAG).

4.4 Revision policy and practice

4.4.1 Revisions follow a regular, well-established, and transparent schedule.

According to current revision policy, a term of three months is established for the revision of indices, although PPI data have never been revised since the start of its publication. The INEC does not yet have a policy of structural PPI revisions such as base changes.

4.4.2 Preliminary data are clearly identified.

The INEC informs users in monthly publications on the PPI that the data for the last month are provisional for three months. In practice, disseminated indices have never been revised and have thus become final on publication.

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

The PPI has not been revised to date, and studies of revisions are therefore not yet pertinent.

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 PPI series is posted on about the 15th of each month on the INEC's Web site and, one month after the end of the reference month, in the monthly publication, "Producer Price Index." This publication is clear and includes supporting charts and tables that clarify PPI trends, including the detailed index weights and a table of contributions to monthly and annual changes in the index. Charts are also included, comparing the PPI and the U-CPI. The publications also contain monthly data for the two previous years (three years for the last month), broken down to the three-digit level of the CPC; this breakdown is considered satisfactory. However, as mentioned above, no analytical report on the PPI is included. Data in the series have not been seasonally adjusted.

5.1.2 Dissemination media and forms are adequate.

PPI data are not disseminated by media release. The data are first disseminated on the Web sites of the INEC and the BCE and then in a monthly INEC publication on the PPI. The more extended time series can be consulted at the INEC library. Unpublished breakdowns of the index can be requested in writing and are supplied with prior authorization from the director of the institution.

5.1.3 Statistics are released on a pre-announced schedule.

The INEC has a PPI production schedule, set in advance by agreement with the BCE. The INEC makes no advance release of the schedule of PPI publications. This is done by the BCE on its Web site, as required under the SDDS.

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

The data are released at the same time to all users, authorities, and the general public.

5.1.5 Nonpublished (but nonconfidential) subaggregates are made available upon request.

Specialized tables of nonpublished (but nonconfidential) data can be obtained at a cost, upon written request and with the prior authorization of the INEC director. There is no public announcement of the terms and conditions under which nonpublished statistics are made available, but the publications contain the addresses at which users can seek further information.

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.

Methodology information available to the public is very limited. Nor has any complete methodology documentation been drawn up within the institution. The methodological summary required under the SDDS is not yet available.

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

Both on the Web site and in the monthly publication on the PPI, very limited information is given on the sources and methods used for compiling the PPI. Further information, though not extensive, can be obtained on request.

5.3 *Assistance to users*

5.3.1 Contact person for each subject field is publicized.

It is the institutional policy of the INEC not to personalize responsibilities for assistance to users. However, mention is made in its publications of the technical personnel responsible for the project and the electronic and nonelectronic mailing addresses to which users can apply for data.

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

The INEC's Directorate of Statistics Dissemination makes available to the public up-to-date catalogues of publications, showing the frequency of issue and the respective costs for acquisition by the public in hardcopy and on magnetic media, within the country and abroad, and availability on the Internet. Prices are published in the monthly bulletin with the data, including information on subscriptions. These releases do not contain lists of the institution's publications.

**Table 3. Ecuador: Data Quality Assessment Framework.
Producer Price Index Summary**

Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
0. Prerequisites						
0.1 Legal and institutional environment 0.2 Resources 0.3 Quality awareness		X	X			Outdated computer equipment, too limited for the personnel.
1. Integrity						
1.1 Professionalism 1.2 Transparency 1.3 Ethical Standards		X	X			The terms and conditions under which statistics are produced are available to the public, albeit not readily so. Reference to these terms and conditions is not included in publications.
2. Methodological Soundness						
2.1 Concepts and definitions 2.2 Scope 2.3 Classification/sectorization 2.4 Basis for recording		X X X X				
3. Accuracy and reliability						
3.1 Source data 3.2 Statistical techniques 3.3 Assessment and validation of source data 3.4 Assessment and validation of intermediate and final output data 3.5 Revision studies	X		X			The PPI does not cover small enterprises. The PPI is a relatively new indicator and there have been no methodological changes or price revisions.
4. Serviceability						
4.1 Relevance 4.2 Timeliness and periodicity 4.3 Consistency 4.4 Revisions policy & practice		X X	X			There are no established procedures for consulting with a wide range of users. No program for updates exists as there is no policy of structural revisions such as base changes.

**Table 3. Ecuador: Data Quality Assessment Framework.
Producer Price Index Summary**

Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
5. Accessibility						
5.1 Data accessibility		X				Documentation on methodology is not comprehensive. Metadata in the public domain are very limited.
5.2 Metadata accessibility				X		
5.3 Assistance to users		X				

Note: NA = Not applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not-observed; NO = Practice Non-observed.
Comment: Only if different from O.

IV. BALANCE OF PAYMENTS STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The BCE is responsible for compiling and disseminating balance of payments statistics. By Executive Decree 1589 of June 13, 2001, published in the Official Gazette, No. 356 of June 27, 2001, the President of the Republic approved the reform of the Charter of the Central Bank of Ecuador. The Charter establishes as part of the sphere of action of the General Directorate of Studies the role of compiling and developing basic and macroeconomic summary statistics for national and international use. The Directorate of Economic Statistics, which is part of the General Directorate of Studies, has the mission of cataloguing external and real monetary, financial, and fiscal statistical indicators and compiling summary statistics.

The BCE's responsibility for compiling balance of payments statistics had already been clearly established in the May 13, 1997 resolution of the former Monetary Board, adopted pursuant to the powers conferred on the board by Articles 87 and 88 (c) of the Law on the Monetary System and the State Bank of May 7, 1992, which approved the *Normas para la producción y difusión de estadísticas del Banco Central de Ecuador (Normas)* [Standards for the Production and Dissemination of Statistics]. These standards established that the BCE is responsible for compiling summary statistics on the balance of payments, money and banking, government finance, and national accounts, through the General Directorate of Studies, which should also implement the standards for the dissemination of statistics.

The unit directly responsible for compiling the balance of payments statistics within the Directorate of Economic Statistics is the Balance of Payments and Foreign Trade Statistics Section (SBP). To carry out its task, it uses basic information provided to it by other institutions such as the Superintendency of Banks, the Superintendency of Companies, the National Migration Directorate, the Directorate of Civil Aeronautics, Petroecuador, the National Hydrocarbons Directorate, the Merchant Marine Directorate, as well as other units of the BCE itself, such as the Debt and Agreements Section (SDC), which compiles the external debt statistics. All the information is provided voluntarily, as there is no legal provision or official resolution establishing the requirement to report to the BCE.

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

The BCE has established a close relationship with other public agencies that provide data for compiling the balance of payments. Special agreements have been reached with the Superintendency of Banks and the Superintendency of Companies to ensure that the

information received is correct and timely. Recently, in view of the growing importance of family remittances, cooperation has been sought from private fund transfer agencies that receive most of the money orders from overseas, to improve the estimates of this item in the balance of payments. There are also appropriate mechanisms for obtaining information from other BCE directorates.

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

The information gathered is completely confidential and used solely for statistical purposes, as indicated in the *Normas*. Specifically, point 7 of the general principles states that: “Individual data compiled on individuals or legal entities shall be considered strictly confidential and used exclusively for statistical purposes. To guarantee this right of the respondent, the Central Bank of Ecuador shall disseminate the standards it adopts in this regard, as well as laws and other legal instruments governing statistical activities.”

In the cover letters that accompany surveys and other requests for information, the respondents are informed that their data will be treated confidentially and exclusively for the purpose of using them in the aggregate to compile the country's balance of payments.

Article 92(m) of the Law on the Monetary System and State Bank empowers the General Manager of the BCE to dismiss any member of staff disclosing confidential information on matters taken up in the [Monetary] Board or in the Central Bank or taking advantage of any information for personal purposes or to the detriment of the State, the Central Bank or third parties.

Published data are presented in the aggregate and checked to ensure that information on individual respondents cannot be identified. Access to individual data within the SBP is restricted to staff who need the information based on their professional duties. There are measures to prevent unauthorized persons from gaining access to the facilities and database of the SBP, to protect the confidentiality of the individual data.

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

Although the BCE's responsibility for compiling and disseminating balance of payments statistics is clearly established in its Charter and in the *Normas*, there is no legal or administrative provision that imposes the requirement to provide the BCE with the information it needs for this purpose. Therefore, there are no penalties for those who fail to provide the information required or who provide incorrect data.

As a result, the SBP has resorted to other mechanisms to encourage the voluntary reporting of information. This means maintaining personal contacts with the respondents and offering them support to make the task of responding to the surveys easier. Respondents are always given the name, telephone and e-mail address of an SBP staff member who can be consulted should they have any questions. In certain cases, personal visits are made to companies to

explain how to complete the forms and to resolve doubts. During these contacts, emphasis is also placed on the importance of obtaining good basic information to ensure the quality of the aggregate statistics compiled by the BCE.

In general, the cooperation that the BCE obtains from the entities from which it seeks information is very good, at both the public sector and private company level. To encourage collaboration, the SBP offers to provide the respondent companies with compiled information that may be of interest to them.

0.2 Resources

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

The SBP has 10 staff members, including the head of the unit. Staffing was reduced by four in 2000, as a result of the general restructuring of the Bank that led to early retirement of personnel to reduce the operating budget. Two more staff members would be needed, primarily to work with the surveys to achieve more timely compilation of the basic information obtained through the surveys. Staff generally has adequate training on the balance of payments methodology and compilation methods. The head of the unit is the only one who has previously participated in training courses organized by the IMF. Two staff members are currently participating in the course on balance of payments methodology at the IMF Institute in Washington. Another staff member has attended a course organized by CEMLA. New personnel joining the unit receive both conceptual and practical training from more experienced staff.

The SBP staff has adequate computer resources to carry out their tasks. Each staff member has a computer for his or her own use. Their computers are linked and also have Internet access and adequate software. The PowerBuilder package is used to compile the foreign trade statistics. There is also direct access to the daily data from the BCE balance sheet through the Financial Information System (SIF), which makes it possible to calculate the international monetary reserve on a daily basis. There is an application (BPA) that explains the daily change in the international reserves. There is also direct access to the database for the rest of the financial system, provided by the Superintendency of Banks, and to data from the Superintendency of Companies.

0.2.2 Measures to ensure efficient use of resources are implemented.

The BCE prepares a Strategic Plan, which includes all the products developed by each Directorate. There is a continuous effort to improve the quality of statistics by applying concepts and methodologies adopted internationally. In 2001, the conversion of the balance of payments statistics to the fifth edition of the IMF's *Balance of Payments Manual (BPM5)* was completed, covering quarterly and annual data starting in 1993.

In processing and disseminating data, the BCE seeks to take advantage of the latest advances in computer hardware and software, for both compiling and disseminating data, particularly data disseminated through the Internet.

In the past, the BCE has contracted an expert, with financing provided by the IDB, to evaluate the methodology and procedures for compiling the balance of payments. It has also received technical assistance from the Central Bank of Venezuela. Last year a request was made to the IMF, particularly for assistance in compiling the international investment position (IIP). It is expected that this request can be met during the next fiscal year.¹

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality.

Article 11 of the Charter of the BCE establishes that the Institutional Development Committee will advise the General Management on improving the institution, to include providing assistance on maintaining and spreading an organizational culture of quality and continuous improvement in the institution's products and processes.

Although specific procedures have not been established for examining the quality of the balance of payments statistics (e.g., external audits), SBP management and staff members are aware that quality, in all its dimensions, is an essential component of statistical work. In cases where information is available from more than one source for the same component, crosschecks are performed and any discrepancies investigated, as in the case of the data on airline fares.

When the information is compiled, the consistency of reported data is checked for internal consistency as well as in comparison with data reported in earlier periods. When inconsistencies are detected, the respondents are contacted so that they can make the appropriate corrections. Checks are also performed when data are input for loading to the database. During the processing of customs documents, which provide the basis for foreign trade statistics, quality checks are performed of both the choice of customs code and the value and volume of imports and exports. Some of these checks are done automatically when the data are loaded, for example, when there are inconsistencies between physical volumes and transaction values or when incorrect units of volume are reported. In all these cases, the exporters or importers are consulted and asked to provide the correct information.

Users both inside and outside the Bank are consulted verbally to obtain their comments regarding the quality of the statistics. Within the institution, the Directorate of Analysis and Short-term Economic Policy frequently evaluates the quality of the data and may make

¹ A technical assistance mission visited the BCE during July 17-30, 2002.

suggestions regarding coverage, the usefulness of the data, etc. Specific products may also be prepared according to its requirements.

Tradeoffs between the various dimensions of quality are recognized, for example, between timeliness and the accuracy and reliability of the data. Publications inform users when the data are provisional, semi-final, or final.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis.

There are legal provisions that give the BCE professional independence. Article 261 of the Political Constitution of the Republic defines the Central Bank of Ecuador as a legal entity under public law with technical and administrative autonomy.

The BCE Code of Ethics, approved by resolution of the General Management on October 2, 2000, establishes in Article 1 that the Bank and its employees must devote themselves exclusively to activities that are conducive to achieving the Bank's objectives and fulfilling its mission, with professionalism, independence, healthy competition, objectivity, and proper use of information.

Professional competence is a key element in staff hiring and promotion practices, as expressly established in Article 13 of the Charter of the BCE.

Presentations or papers on methodology prepared by staff are disseminated at meetings, workshops, and seminars organized by the BCE, thus promoting professionalism. In addition, the General Directorate of Studies maintains various publications in which methodological aspects of statistics are explained in detail (in the *Cuadernos de Trabajo* [Workbooks] series), research results are presented (in the *Notas Técnicas* [Technical Notes] series), and papers on current topics presented at seminars or workshops for national or foreign economists are published (in the *Cuestiones Económicas* [Economic Issues] series).

Research and methodology papers are reviewed internally prior to being published. They are also submitted for approval by an editorial board that evaluates their relevance, considering the usefulness or general interest of the work, although without limiting the authors' professional independence.

1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.

The SBP staff chooses the data sources (e.g., administrative records or surveys) and the methodologies for compiling balance of payments statistics solely on the basis of statistical considerations with respect to the coverage, reliability, and timeliness of the data that can be

obtained from alternative sources. Survey design takes into account the methodological recommendations contained in the *BPM5* with respect to the classification and coverage of balance of payments transactions. Disclosure of the methodologies used is always encouraged, so that users will know how the data are compiled. This is done through the BCE's publications, *Cuadernos de Trabajo*, *Notas Técnicas*, and *Información Estadística Mensual*, and on the Bank's Web page: www.bce.fin.ec.

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

When the SBP finds that the media have made errors in interpreting or analyzing data, it contacts them so that they will make the appropriate corrections or clarifications. In certain cases where misinterpretations or misstatements appear in other venues, for example, in the political arena, the respective clarifications may be made by the General Director of Studies.

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 Law, the BCE rules on data dissemination, the code of conduct, and the publication schedule are available on the BCE's Web page. Also included is the e-mail address of the person who can be contacted for additional information, who refers requests for information to the appropriate unit.

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

National authorities do not have access to statistics before they are released to the public. This is noted in the balance of payments metadata on Ecuador's page on the IMF's SDDS site.

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

All published tables include a footnote indicating the source of the data. In the case of the balance of payments statistics published in *Información Estadística Mensual* [Monthly Statistics], the footnote states: PREPARED BY: Central Bank of Ecuador – Balance of Payments. In addition, all BCE publications bear the institution's logo.

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

In August 2000, the BCE's General Directorate of Studies published *La balanza de pagos de Ecuador: notas metodológicas y resultados (año 1993)*, which described the new presentation of the balance of payments based on the *BPM5*. Prior to its publication, selected users of the balance of payments were informed by telephone or in person of the

methodological changes that would be introduced. The Bank's internal users were aware of the work that was being done and participated in technical discussions regarding the new presentation.

1.3 Ethical standards

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

There is a Code of Ethics approved by resolution of General Management that should guide the conduct of all BCE staff. New staff members are informed of these rules when they join the institution, and all personnel are periodically reminded that they must adhere to them. This is done by e-mail and through internal Bank notices and publications. Violation or nonobservance of the standards of conduct established in the Code of Ethics is penalized according to the provisions of Articles 78 to 83 of the Regulations of the Human Resources Administration.

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 balance of payments statistics are based on concepts, definitions, and classification consistent with the *BPM5*. The data were first published according to the *BPM5* in 2000 and covered the year 1993. Subsequently, in August 2001, a special publication was released with quarterly and annual data for the period 1993-2000, as well as methodological notes and information on the data sources. The publication also presents a description of the conceptual framework of the balance of payments according to the *BPM5*, as well as an analysis of the principal differences between the fourth and fifth editions of that manual.

To date, the international investment position (IIP) statistics has not been compiled, although Ecuador, as an SDDS participant, has made the commitment to publish the IIP by June 2002.²

² An IIP statement was released by the BCE on June 27, 2002.

2.2 Scope

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

The statistics record transactions between residents and nonresidents, following the residence criteria in the *BPM5*. However, no data are collected on direct and portfolio investment by residents. When dollarization was introduced, the exchange of national currency in circulation for dollars led to a decline in the BCE's reserve assets. Some of the dollars transferred to the public in exchange for local currency increased bank holdings and was reflected in the balance of payments as an increase in the external assets of banks in the form of currency and deposits. The remaining dollars were held by the public, but no entry was made in the balance of payments to record this increase in external assets in the form of currency and deposits of other sectors, and thus were included in net errors and omissions. Subsequently, all of the public's cash transactions with banks affect the volume of the latter's foreign exchange holdings. This change is implicitly recorded in the balance of payments, as the banks' external assets are derived as the difference between their holdings at the beginning and at the end of each period. As with the initial exchange, contra-entries are not recorded under the assets of other sectors, and they therefore are included in net errors and omissions.

2.3 Classification/sectorization

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

The balance of payments statistics are organized according to the structure and classification of the *BPM5*. The unit of account has always been the US dollar, so the dollarization of the economy in 2000 posed no problem of converting the data from earlier years. Following the guidelines of the *BPM5*, the balance of payments statement presents the standard components in three principal groups of accounts: the current account, which differentiates subcategories of goods, services, income, and current transfers; the capital account; and the financial account. The classification of the financial account follows the guidelines of the *BPM5*, classifying the components by type of investment: direct, portfolio, other investment, and reserve assets. Within portfolio investment and other investment, a distinction is made by type of instrument: equity securities, debt securities, trade credits, loans, currency and deposits, and other assets and liabilities. For liabilities, there is a breakdown within each instrument by institutional sector of the domestic debtor. The sectors that are distinguished are those established in the *BPM5*: monetary authorities, general government, banks, and other sectors. For assets, sectorization is not applied, although the necessary information is available. For other investment, the *BPM5* presents an additional breakdown of each sector, distinguishing between short- and long-term assets and liabilities depending on whether the original contractual maturity is one year or less or more than one year. The BCE presentation does not show this breakdown.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

Balance of payments transactions are generally recorded according to the valuation principle based on market prices, as stipulated in the *BPM5*. A significant exception was the method used to record an important operation in which external public debt securities were exchanged in 2000, where the redemption of the original securities was recorded at their face value, and not at their value minus the discount received.

Most balance of payments transactions are in dollars and they therefore present no conversion problem, as the dollar is the unit of account. When the currency of the transaction is not the dollar, the data are converted to dollars using the exchange rate in effect on the date the transaction is recorded. This rule applies, for example, to the customs documents that form the basis for the foreign trade statistics compiled by the SBP.

Flows of reserve assets are based on the stock data provided in the monetary statistics. These data are not available in the original currency but are already converted to dollars at the original currency's exchange rate against the dollar prevailing at the end of each period. When these transactions are calculated in this way, it is very difficult to exclude from the total change what might be due to changes in price and in the cross exchange rates.

2.4.2 Recording is done on an accrual basis.

The criteria recommended by the *BPM5* are generally followed. The most important exception to this practice is interest on external debt, which is recorded when payment comes due. With respect to the goods account, as compilation is based on customs documentation, recording is done when the goods cross the country's customs border, and thus there is no strict connection to the change of ownership principle, as the change formally happens when the exporter or importer records the transaction in his/her books. The *BPM5* itself recognizes the practical difficulty of applying this rule.

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

The guidelines of the *BPM5* are generally followed for recording transactions in gross or net terms. Current account and capital account transactions are recorded as gross values, while financial account transactions are recorded as net values and separately for assets and liabilities. One case where assets and liabilities are not recorded separately is that of reserve assets, where deposits in foreign banks are netted of liabilities from gold swaps and the position with the Latin American Reserve Fund (LARF) is included even when it is a liability. For debt transactions, additional information is provided on disbursements and redemptions.

3. Accuracy and reliability

3.1 Source data

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

The data used to compile the balance of payments are generally considered adequate. There are frequent contacts with the main suppliers of basic information within the private sector, whether in person or by telephone, to ensure that there is a clear understanding of the data needed, and also to clear up any doubts or problems that arise when completing the data reports. The principal data sources are described below.

For the goods heading, the source of data for the principal component, general merchandise, is the foreign trade statistics compiled by the SBP itself, based on customs documentation, the uniform import document and the uniform export form. The compilation follows the United Nations recommendations contained in *Foreign Trade Statistics: Concepts and Definitions* (1998). The valuation base is f.o.b. for both exports and imports. Information provided by Petroecuador and private petroleum companies is used for exports of crude oil and derivatives. In addition, an adjustment is made to the coverage of imports to include imports of military equipment, on which information is provided by the National Defense Board. Adjustments are made to both exports and imports to include unrecorded trade, based on estimates made by the BCE's National Accounts Section. For the other components of the goods account, there is information on "Repairs on goods" from the Civil Aviation Directorate and General Merchant Marine Directorate. As for the component "Goods procured in ports by carriers," the sources are national suppliers (credits) and national transportation companies (debits). There are no transactions in "Goods for processing."

The source of data for estimating the Travel account is the National Directorate of Migration and Alien Status, which provides information on incoming and outgoing movements of passengers through national ports and airports and border crossing points, with details on the reason for travel, whether personal or business, profession, and length of stay. This information is supplemented by surveys of hotels and other facilities involved with tourism packages. Daily spending by travelers is estimated based on these indicators, as no surveys are conducted to estimate the average length of stay and daily expenditure of travelers.

For other components of the services account, the principal sources of data are surveys conducted by the SBP at various public and private companies that provide or receive services from overseas, such as national transportation companies, foreign airlines, shipping agencies, Anditel and Pacifictel (telecommunications), television channels, film distributors, etc. For financial services, the information from the SDC on commissions paid for external public debt is used. No information is gathered on the banking system's financial services provided or received from nonresidents. For government services, credit items are based on a survey of embassies, consulates, and offices of international organizations in the country; this

survey is conducted through the Ministry of Foreign Relations. The debit data are taken from the BCE's records of external transactions.

The database of the Superintendency of Companies is the source for recording direct investment income and capital. For portfolio investment, information is obtained from the SDC on interest, disbursements, and repayments on debt securities issued by the Government (Brady bonds, eurobonds, and global bonds). The SDC also provides information on public and private external debt (loans and credits from suppliers) interest, disbursements, and repayments. The information on reserve assets is obtained directly from the Financial Information System, which collects the data each day from the BCE balance sheet.³ As for the information that is obtained through surveys, a directory is maintained of companies that provide information on the services accounts, which is constantly being updated. The percentage response to these surveys is no more than 65 percent. As there is no system of penalties for noncompliance, an effort is made to obtain the information from those who do not respond through telephone calls and/or personal visits to the companies. Sampling techniques are not used for compilation.

There is no international transactions reporting system in place.

When revisions are made to provisional estimates, all necessary changes are incorporated by using all available updated information.

The financial press is monitored and when references are found concerning significant transactions about which the SBP has no information, note is made of these transactions so that they can be investigated by contacting the entities mentioned. One example is information on donations that the country receives from foreign governments or nongovernmental institutions.

No meetings are held with the participants in financial markets and the business community to determine new aspects that should be taken into account in the system for compiling the balance of payments.

³ By Resolution 12 of April 2000, the BCE Board defined the method for calculating readily available international reserves (RILD). The components of RILD are monetary and nonmonetary gold, the special drawing rights, the reserve position in the Fund, foreign currency assets (currency, deposits, and securities), and the position with LAIA. The fineness characteristics of nonmonetary gold are the same as those of monetary gold. The only distinction is that nonmonetary gold was originally acquired from local producers, but the distinction has now become irrelevant, as nonmonetary gold has the same characteristics and purposes as monetary gold.

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

The data obtained from surveys conducted by the SBP are generally satisfactory, as the design of the surveys and the instructions for completing them, as well as the respondents' ability to ask questions when in doubt, help to ensure that the results are generally consistent with the requirements of the *BPM5*. Some adjustments are made to improve coverage, for example, in the case of foreign trade statistics. One area where the source data make it impossible to follow the *BPM5* recommendations on time of recording is that of external debt interest, because the information obtained from the UNCTAD's Debt Management and Financial Analysis System (DMFAS) used by the SDC indicates when interest becomes due and not when it is accrued.

3.1.3 Source data are timely.

Foreign trade data are disseminated by the SBP one month plus three working days after the reference period. The survey data are also received in a timely manner, thanks to SBP follow-up to obtain the responses within the period indicated when the survey forms are distributed.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques.

Surveys are designed to be easily completed and processed. The data reported are checked before being processed electronically, as are the results of processing. There are also automatic controls to detect errors in the processing of foreign trade statistics.

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

It is not necessary to determine a c.i.f./f.o.b. factor to value imports, as the customs information assigns values on both a c.i.f. and an f.o.b. basis.

Border trade is estimated, using information on the number of people crossing the land borders provided by the Migration Directorate and research on the amounts of purchases made. These estimates are included in the travel account.

The National Accounts Section estimates unrecorded trade, using information on import data from partner countries.

The methodology used to calculate trade credits associated with exports should be revised. The estimates are derived from information contained in the customs documents regarding the method of payment for exports. This information is recorded under trade credits. However, there is no information on the financial movements corresponding to the actual

payment, either in advance of or after the shipping date, so that only debit entries are recorded under this heading.

There are also shortcomings in the methodology used to estimate movements for Currency and Deposits (part of other investment assets for private sector transactions). Most of these transactions are channeled through the banking system, and thus the counterpart is already included in the net change in the banking system's holdings of foreign currency and deposits abroad, information on which is obtained from the monetary statistics. For the item Currency and Deposits there is no breakdown by resident institutional sector, entries for banks and other sectors are not shown separately. The latter should include those transactions that could be obtained from some specific data source. For example, the increase in dollar holdings by individuals as a result of changing sucres into dollars with the introduction of dollarization should be recorded here.

3.3 *Assessment and validation of source data*

3.3.1 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 planning.

Surveys are not conducted on the basis of sampling. No studies have been conducted on nonsampling error. Transactions involving significant amounts are checked with the respondents. The consistency over time of the data reported is checked.

3.4 *Assessment and validation of intermediate data and statistical outputs*

3.4.1 Main intermediate data are validated against other information where applicable.

Survey data are not validated using other independent sources, such as BIS data. Information published in the press is not used to check direct investment transactions and other transactions in significant amounts, but it is used where there is no information in the source data.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Some balance of payments components are crosschecked with other related series. Thus, reported flows of external debt disbursements and repayments are compared with changes in the corresponding outstanding stocks.

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

The magnitude and sign of the net errors and omissions item is followed up, and efforts are made to see what statistical deficiencies may have caused them. As for foreign trade, bilateral reconciliations are done with some countries, as part of the work of estimating unrecorded

trade. No comparisons are made between external debt data and the data compiled jointly by the BIS, the IMF, the OECD, and the World Bank. Nor is use made of the international banking statistics by country that the BIS compiles.

3.5 Revision studies

3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes

No studies are conducted to evaluate revisions to balance of payments statistics.

4. Serviceability

4.1 Relevance

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

The concerns and suggestions of the principal users are gathered verbally and taken into account for the future. SBP staff members regularly participate in statistics meetings and seminars organized by international and regional organizations, such as the IMF and CEMLA.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards.

The timeliness of the balance of payments statistics is consistent with SDDS requirements. Balance of payments data are released 70 days after the close of the reference quarter, and annual data are released simultaneously with fourth quarter data.

4.2.2 Periodicity follows dissemination standards.

The periodicity of the data is consistent with the SDDS and statistics are released quarterly.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset (e.g., accounting identities observed).

The same concepts, definitions, and classifications are used to compile annual and quarterly statistics. However, it should be noted with respect to delays in debt service that there are discrepancies between the quarterly figures and the annual figures. This is because delays occurring and resolved during the course of the year, although not in the same quarter, are eliminated when the annual figures are prepared. For other components, when revisions are

made based on available information on an annual basis only, corrections are made to the quarterly data to ensure consistency with the annual data.

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

The balance of payments historical series for the period 1993-2000, with quarterly and annual data, were revised in 2001 when conversion of the data to the BPM5 format and methodology was completed. For earlier years, the series are based on the BPM4 methodology. When changes are made in source data, methodology, or statistical techniques, the historical series are reconstructed to the extent possible.

At the time of conversion to the *BPM5*, the publication *La balanza de pagos de Ecuador: metodología de elaboración y series 1993-2000* presented a detailed explanation of the new methodology, as well as a table comparing the fourth and fifth editions of the *BPM*.

No explanations are provided on unexpected fluctuations in statistical series trends, because no analytical texts are presented in the balance of payments publication or in the database.

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

The balance of payments statistics can be reconciled with the foreign trade, national accounts, and external debt statistics.

Foreign trade statistics are the basis for the goods account in the balance of payments. Certain adjustments are made to improve coverage. The balance of payments statistics are broadly compatible with the national accounts statistics, as the SNA's rest of the world account is compiled on the basis of data from the balance of payments current account. The flows of BCE reserve assets cover the same accounts as are included in the monetary and financial statistics. In contrast, the balance of payments does not include the flows of other external assets of the BCE, and the flows of external assets and liabilities in the rest of the financial system are not consistent with the stock data presented in the monetary and financial statistics. The external debt statistics compiled by the BCE's SDC, using the DMFAS system, provide the breakdown of initial balances, disbursements, amortizations, interest, adjustments, and final balances and are the basis for the entries in the balance of payments.

The IIP has not been published as yet, and therefore flows are not reconciled with changes in positions. According to a commitment made to comply with the SDDS, the IIP will be released in late June 2002.

4.4 Revision policy and practice

4.4.1 Revisions follow a regular, well-established, and transparent schedule.

There is no pre-established schedule for making revisions. The figures published since 1997 are considered provisional. Even information corresponding to earlier years that has already been revised is subject to further revision if new information is obtained to justify this. The new data are included as soon as possible, but there is no regular schedule, as timing depends on when new information is obtained. The publication on statistical series and the database do not include documentation on revisions made.

4.4.2 Preliminary data are clearly identified.

Users are informed when data are provisional, in a footnote. The revised data are released with the same level of detail as the data published earlier that are being revised. The format of the tables for provisional and final data is the same. There are no studies or analyses of revisions made and therefore no publication in this regard.

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 components of the balance of payments are presented according to the *BPM5*, in formats similar to those published in the IMF's *Balance of Payments Statistics Yearbook*. The BCE's *Información estadística mensual* publishes only a summary analytical presentation of the balance of payments. The March 2002 release presented annual data for 1993-2001 and quarterly data from the first quarter of 2000 to the fourth quarter of 2001. The quarterly balance of payments statistics, published in *Información Estadística Mensual* and on the BCE's Web page, follow a summary presentation that excludes certain aggregates useful for analysis. For example, totals are not given for current account credits and debits, only the net balance, nor are gross or net totals shown for goods and services, or goods, services, and income. In the goods account, the adjustment for unrecorded trade is recorded in net terms within imports. This treatment of unrecorded trade, in addition to diverging from the *BPM5* principle of recording current account transactions in gross terms, can confuse users, because it is not consistent with the presentation in the publication that covered the period 1993-2000, where unrecorded trade correctly appeared in gross terms under exports and imports. Thus, total exports and imports of goods are different in the two publications.

There is no detailed information available for the year 2001. Detailed information, including the standard components, has been released only in the publication that covered the period 1993-2000. To date, only annual statistics are sent to the IMF for publication in *International Financial Statistics* and the *Balance of Payments Statistics Yearbook*, although

disaggregated quarterly data are available. *Información estadística mensual* publishes charts on imports and exports of goods, the trade balance, and public and total external debt.

5.1.2 Dissemination media and formats are adequate.

Data are released almost simultaneously on the BCE's Web page and in *Información estadística mensual*. The longer time series are not electronically accessible to users. These are available only in a publication that presents data for 1993-2000 according to the *BPM5*.

5.1.3 Statistics are released on the pre-announced schedule.

Balance of payments statistics are released according to a pre-announced schedule that appears on the BCE's Web page.

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

Balance of payments statistics are released simultaneously to all interested parties on the date shown in the previously indicated release schedule. Statistics are not released to the press in advance.

5.1.5 Nonpublished (but nonconfidential) subaggregates are made available upon request.

The SBP tries to satisfy requests for additional data that it receives. As the SBP is responsible for foreign trade statistics, many of the requests involve more detailed information on export or import data. The availability of nonpublished statistics and the terms and conditions under which they are provided to interested parties are not disclosed to the public.

5.2 Metadata accessibility

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

The BCE's Web page has a link for accessing the SDDS metadata that appear on the corresponding IMF Web page. *Información estadística mensual* publishes methodological notes on Ecuador's balance of payments and a comparative summary of the classification of balance of payments components, based on the fourth and fifth editions of the *BPM*.

The methodological summary is also available on the BCE's Web site and refers to publications that users can access for greater detail. These are: "La balanza de pagos de Ecuador: notas metodológicas y resultados (año 1993)" [Balance of Payments of Ecuador: Methodological Notes and Results (1993)] in *Cuadernos de Trabajo*, No. 124, August 2000, and *La balanza de pagos de Ecuador: metodología de elaboración y series 1993-2000* [The Balance of Payments of Ecuador: Compilation Methodology and 1993-2000 Series].

The publication "*La balanza de pagos de Ecuador: metodología de elaboración y series 1993-2000*" contains a much more detailed methodological note. This note transcribes a large part of the conceptual framework and classification scheme for the balance of payments contained in the *BPM5*. The sources and procedures for compiling Ecuador's balance of payments are also documented. This description is much less exhaustive than that for the *BPM5* standards and has some conceptual errors. For example, in the case of interest income, the concept of accrual-basis recording has been confused with the concept of recording when payment comes due.

The SDDS metadata are revised quarterly, as established by the standards.

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

No informative brochures have been prepared for users regarding balance of payments statistics and other statistics relating to the external sector, as the information is available on the BCE's Web page and in the monthly publication. When users want to obtain information in greater detail than what is released, they must request this from the SBP, which will try to satisfy these requests.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized.

The BCE provides assistance to users who request it. The BCE's Web page indicates staff members whom users can contact. A brochure is also published listing all the BCE's publications. There are no periodic user surveys to follow up the assistance provided to users.

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

There is a catalogue of publications and documents that is updated frequently and is available to users, including on the BCE's Web page. Information is provided on the prices of these products, which are generally quite affordable. The SDDS metadata indicate the person to be contacted if someone wants to purchase a publication.

**Table 4. Ecuador: Data Quality Assessment Framework
Balance of Payments Statistics Summary**

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
0. Prerequisites						
0.1 Legal and institutional environment		X				More staff is needed to work on surveys.
0.2 Resources			X			
0.3 Quality awareness			X			
1. Integrity						
1.1 Professionalism		X				In the case of the BPM5 conversion, advance notice of a major methodological change was restricted to selected users.
1.2 Transparency			X			
1.3 Ethical Standards		X				
2. Methodological Soundness						
2.1 Concepts and definitions			X			The International Investment position has not been compiled. Some valuation adjustments have been recorded as transactions.
2.2 Scope			X			No data are collected on direct and portfolio investment by residents.
2.3 Classification/sectorization			X			Assets are not sectorized by resident institutional sector.
2.4 Basis for recording			X			Interest is recorded when payment falls due. Certain reserve assets are not recorded in gross terms.
3. Accuracy and reliability						
3.1 Source data			X			No surveys are conducted to estimate the average length of stay and daily expenditure of travelers.
3.2 Statistical techniques			X			The methodology for calculating certain items in the financial account is inappropriate.
3.3 Assessment and validation of source data		X				Survey data are not validated using other sources. International data sources like the BIS are not used.
3.4 Assessment and validation of intermediate and final output data			X			

**Table 4. Ecuador: Data Quality Assessment Framework
Balance of Payments Statistics Summary**

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
3.5 Revision studies					X	No revision studies are conducted
4. Serviceability						
4.1 Relevance			X			There are no formal procedures for consulting users. The annual data on payments arrears are not consistent with the quarterly data. There is no preset timetable for revisions, and there are no studies or analyses of revisions.
4.2 Timeliness and periodicity		X				
4.3 Consistency			X			
4.4 Revision policy and practice				X		
5. Accessibility						
5.1 Data accessibility			X			Quarterly data are only available in a summary analytical presentation. The description of data sources and compilation procedures is incomplete and includes some conceptual errors.
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				

Note: NA = Not applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not-observed; NO = Practice Non-observed.
Comment: Only if different from O.

V. GOVERNMENT FINANCE STATISTICS

0 Pre-requisites of quality

0.1 Legal and institutional environment

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

Ecuador's fiscal statistics are compiled according to the terms and conditions established in: (i) the Statistics Law (Official Gazette, No. 82 of May 7, 1976); (ii) the Public Sector Budget Law of 1992 (Official Gazette, No. 76 of November 30, 1992); (iii) the Regulations of the Public Sector Budget Law (Official Gazette, No. 136 of February 26, 1993); (iv) BCE Board Resolution DBCE-097-BCE of May 16, 2001; (v) Ministerial Agreement 094 (Official Gazette, No. 306 of April 16, 2001); (vi) Executive Decree 1589 (Official Gazette, No. 356 of June 27, 2001); and (vii) the BCE's *Normas para la Producción y Difusión de Estadísticas* [Standards for the Production and Dissemination of Statistics] (approved by Resolution JM-626-BCE of May 13, 1997).

By Agreement 005 of the Comptroller-General's Office (Official Gazette, No. 626 of February 3, 1995), as of January 1995 the Comptroller-General's Office (CGN) ceded its functions of collecting and consolidating the financial information from public sector agencies to the National Government Accounting Directorate of the MEF. In addition, Article 259 of the 1998 Political Constitution of the Republic establishes the MEF's obligation to report to the National Congress every six months on execution of the budget and its annual outturn.

In practice, the Central Bank of Ecuador (BCE) is the institution responsible for compiling and disseminating government finance statistics (GFS¹). The GFS are to a large extent compiled on the basis of the information that the MEF provides to the BCE for the central government.

Ministerial Agreement 094 of April 2001 redefines the MEF's function within the dollarization process, that is, it establishes its role as the regulator of government finances in the country, with a new organizational structure and functions. In addition, as of January 10, 2000, the President of the Republic, through the above-mentioned Executive Decree 1589, approved the Organic Charter of the BCE of May 2001, which establishes its new structure and functions. The Organic Charter of the BCE assigns to the General Directorate of Studies (DGE) responsibility for "compiling and developing basic and

¹ In this report, the term "GFS" refers to fiscal statistics compiled and disseminated for analytical purposes in accordance with internationally accepted standards.

macroeconomic summary data for national and international use.” For these purposes, the DGE has the Directorate of Economic Statistics, whose mission is, among other things, to “catalogue external, real, monetary, and fiscal statistical indicators.” It should be pointed out that the Organic Charter of the BCE supports the BCE’s *Normas para la Producción y Difusión de Estadísticas*, which establish: (i) the BCE’s responsibility for preparing summary statistics, particularly on monetary and banking aggregates, national accounts, the balance of payments, and government finances; and (ii) the requirements with respect to the periodicity and timeliness with which the GFS are disseminated.

The above-mentioned Ministerial Agreement 094 is now being implemented in the MEF, but has not yet been put into practice in the Undersecretariat for Economic Policy (SPE). It is expected that this process will provide an opportunity for evaluating the tasks currently carried out by the MEF and the BCE, so as to avoid duplication and to harmonize and complement their functions.

Both the MEF and the BCE monitor government debt but do so independently, and this results in some duplication of functions with respect to the preparation of data on external public debt.

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

The BCE compiles GFS primarily from information on the budget execution provided by the MEF. In addition, the BCE uses data supplied directly to the BCE by other agencies that comprise the nonfinancial public sector (NFPS), but which by law do not form part of the central government (local governments, other autonomous agencies, and nonfinancial public enterprises).

Although the BCE’s *Normas para la Producción y Difusión de Estadísticas* establishes that the BCE is responsible for promoting the collection of basic statistics through direct inter-institutional agreements, there are no formal agreements on collaboration between the BCE and the MEF. However, it was noted that there is a close working relationship and a high level of communication at the technical level between both institutions. For example, working meetings are held regularly to evaluate the consistency of the figures, although not through committees specifically established for that purpose. Despite this close communication, the flow of information from the MEF to the BCE is not timely. The BCE must therefore obtain the information from various MEF offices to compile monthly GFS according to the established timetable. In this regard, it was observed that the delay in the flow of information to the BCE is due primarily to the fact that the MEF’s Integrated Financial Management System (SIGEF) cannot be used to generate the information with the level of detail recommended in the IMF’s *Manual on Government Finance Statistics, 1986 (GFSM 1986)*, and needed by the BCE.

As mentioned above, there is some duplication of functions between the MEF and the BCE regarding the preparation of external debt data. The BCE compiled these data in the past. However, with the acquisition in 1997 of the System for Management and Analysis of

External Debt (SIGADE), which was installed in both institutions, the MEF began to monitor domestic and external public debt. The MEF's Undersecretariat of Public Credit (SCP) compiles the *Boletín Estadístico de la Deuda Pública Externa* [Statistical Survey of External Public Debt] primarily for domestic use and limited distribution. On the other hand, the BCE publishes stock and flow data on central government external debt in *Información Estadística Mensual (IEM)* [Monthly Statistical Information], as well as information on external (public and private) debt, within the context of balance of payments.

0.1.3 Respondent's data are to be kept confidential and used for statistical purposes only.

The confidentiality of respondents' data is protected by the Statistics Law, which can be found on the BCE's Web site. Article 21 of this law states that individual data (in the case of the GFS, budget outturns, account statements, and use of funds by individual public sector agencies) obtained for statistical purposes and censuses are confidential. Therefore, only statistical summaries, global aggregates, totals, and generally impersonal data can be disclosed.

In the case of the BCE, its *Normas para la Producción y Difusión de Estadísticas* "guarantee the confidentiality of any information that can be personalized or broken down by individual and that has been made available to or placed in the custody of the institution." In practice, the MEF and the BCE guarantee that the economic information from public sector agencies will be used for statistical purposes, that is, in consolidating the results at various levels.

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

The 1992 Public Sector Budget Law establishes the requirement that central government agencies submit to the MEF information on budget outturns 10 days after the end of the month. Despite the law, there are often delays in submitting the information. In cases of noncompliance, the MEF has the power to suspend transfers, although in practice it does not generally resort to these measures. In addition, the BCE does not have legal provisions to invoke; it depends on informal arrangements for reporting entities to send the information, and the latter do not always meet the established deadlines.

All agencies comprising the nonfinancial public sector supply information according to technical budget standards and classifiers of revenue and expenditure. The latter are detailed in the "General Catalogue of Accounts and Budgetary Classifier of Public Sector Revenue and Expenditure." Both the MEF and the BCE maintain contact with respondents to obtain better results in terms of the quality of the information. The MEF provides training to public entities when methodological changes or new charts of accounts are implemented.

0.2 Resources

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

The GFS are compiled at the BCE by the Fiscal Statistics Process (PEF) which is staffed with four economists. Staff training in methodological aspects is primarily in-house as there are limited opportunities for outside training. All team members are trained to carry out any function related to GFS compilation. It was noted that opportunities for rotating within the BCE are limited. Measures have not been adopted to encourage the retention of experienced staff as the BCE is undergoing a process of modernization and consolidation, which has led to the departure of trained staff. As insufficient staff are assigned to GFS compilation, it is important to emphasize the need to increase human resources, and above all to provide training to support migration to the methodology proposed in the IMF's *Government Finance Statistics Manual, 2001 (GFSM 2001)*. The PEF has state-of-the-art computer resources and other modern technologies that facilitate the compilation and dissemination of GFS. Each staff member has a personal computer and access to the Internet.

Currently the statistical work in the MEF is performed by three economists in the SPE, which coordinates its activities with the rest of the MEF. In the ongoing reorganization of the MEF, it is important that the new Office of Fiscal Statistics be provided with sufficient staff and that they receive the necessary training to carry out the functions that have been assigned to the office. In addition, like the BCE staff, MEF staff will need training to facilitate the adoption of the *GFSM 2001*. It was noted that the computer resources at the MEF are adequate.

0.2.2 Measures to ensure efficient use of resources are implemented.

The costs associated with compiling fiscal statistics in the MEF and the BCE are not calculated, and it is not known with any certainty whether the available resources are used with maximum efficiency. However, as mentioned earlier, the MEF and the BCE have invested significantly to keep their computer systems up-to-date and develop work tools that allow them to compile fiscal statistics efficiently.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality.

The BCE recognizes that the quality of GFS is essential for accurately diagnosing the fiscal situation and for formulating and implementing effective fiscal policy. The BCE is also aware that quality promotes public trust in statistics. In this regard, it should be pointed out that Article 3 of the Organic Charter of the BCE delegates "technical and administrative leadership of each process to a Director who shall be responsible for the quality of the output, optimization of the process, efficient use of resources, and customer satisfaction." In addition, the BCE's *Normas para la Producción y Difusión de Estadísticas* indicate that the

BCE shall continuously seek to improve and update the methods for compiling, storing, and presenting statistical data.

The MEF, as the generator of primary data for the BCE, has also made efforts (e.g., systemization, in-house training, and training the reporting government entities) to improve data quality.

For several years the BCE has been making a significant effort to compile and disseminate GFS in a more transparent and timely manner. In addition, Ecuador participates in and observes the IMF's Special Data Dissemination Standard (SDDS). However, no periodic surveys of external GFS users (with the exception of a general survey on all statistics carried out by the BCE some years ago) are conducted, nor are there systematic mechanisms in place for gathering comments from users and determining if their statistical needs are adequately met. Nonetheless, users can send queries and comments to the BCE through the BCE Web site.

0.3.2 Processes are in place to monitor the quality of the collecting, processing, and dissemination of statistics.

With respect to primary information, the CGN approves the technical accounting standards applicable to all entities comprising the nonfinancial public sector. All these entities therefore use the same catalogue of accounts. The accounting standards in effect are established in Agreement 017CG issued by the Comptroller-General (Official Gazette, No. 430 of April 28, 1994) and errata (Official Gazette, No. 461 of June 14, 1994). To establish data quality, catalogues, and standardization, rules have been issued pertaining to revenue and expenditure accounts.

Existing mechanisms for assessing the quality of GFS compilation and dissemination are designed mainly to ensure that the primary information is consistent with final results. In particular, as indicated earlier, the automation of various data maintenance processes (Fiscal Base) as well as of data generation and verification has been promoted. However, weaknesses in the reporting of data sources to the BCE (discussed in section 3. Accuracy and Reliability) impede a more efficient assessment and verification of the source data at the early stages of data compilation.

In addition, the BCE Web page is a tool that allows users to submit queries or request further information.

0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.

No formal procedures have been established to assess the quality of the disseminated data. However, continuous efforts are made to ensure the timeliness and internal consistency of the data. In recognition of the tradeoffs between data quality aspects (e.g., between timeliness

and accuracy and reliability), the BCE publishes monthly GFS first as “provisional” figures, revising them to “final” the following month.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis.

As indicated earlier, GFS are compiled on the basis of accounting records and administrative reports from reporting entities, which follow the same catalogue of accounts and budgetary standards derived from the legal framework. In addition, compilation practices are presented in methodological notes on the BCE’s Web site.

In accordance with the Political Constitution of Ecuador (Article 262), the BCE has technical and administrative autonomy. The Organic Charter of the BCE applies to various statistical areas, including GFS, and establishes: (i) professional competence as a basic requirement for hiring employees, salary levels, and staff promotions; and (ii) the obligation of staff to adhere to the institution’s code of ethics.

Some efforts are made to promote professionalism among the staff responsible for compiling GFS in the BCE by preparing methodological notes that are more extensive than those appearing in the *IEM*. However, no seminars are conducted on methodological advances in this field.

1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.

GFS compilers at the BCE and the MEF are free of all political influence in the selection of data sources and the most appropriate compilation methods. Similarly, changes in statistical procedures respond to technical rather than political criteria. The choice of data sources depends, to a great extent, on the basis of recording data as well as on the availability of the information needed to compile and disseminate GFS.

Prior to 2000, the compilation systems sought to measure government activity focusing on data for the central government compiled, in general, according to the recommendations of the IMF’s *Manual on Government Finance Statistics, 1986 (GFSM 1986)*. Since the introduction of the SIGEF in the MEF on January 22, 2001, it has not been possible to generate information on central government expenditures with the level of detail recommended in the *GFSM1986* and needed by the MEF and the BCE to satisfy their information needs.

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

The BCE's *Normas para la Producción y Difusión de Estadísticas* state that "the technical offices of the institution may respond regarding erroneous interpretations or inappropriate use of the data." In case of significant errors of interpretation appearing in the media, senior officials of the BCE or MEF make the respective clarifications. For example, when the press unilaterally elaborates aggregates that are not technically possible and analyzes the results, the BCE or the MEF releases explanatory material to correct erroneous interpretations.

The compilers of the GFS are authorized to provide specialized advice regarding technical aspects and requests for additional information from users, but they must refrain from issuing opinions on public policy.

1.2 Transparency

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

The laws, regulations, methodologies and manuals for classifying revenue and expenditure that govern the compilation and dissemination of GFS are available to the public on the Web sites of the MEF and the BCE and/or at their respective libraries. For example, the National Statistics Law and the BCE's *Normas para la Producción y Difusión de Estadísticas* are found on the BCE's Web site. The BCE's library contains, among other items, the 1992 Public Sector Budget Law and Law 1190 of 1993. The Tax System Law is posted on the MEF's Internet site.

There are no express restrictions on the aggregate information generated by the BCE (as the data are aggregated by subsector), which can be consulted through electronic or print media. In addition, the user can be given additional information as requested, provided that the rules on preserving the confidentiality of information are respected (i.e., that individual information is not involved).

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

No public official or entity other than the MEF and the BCE has access to GFS prior to their release. These statistics are disseminated to the general public at the same time, in the BCE publication *IEM*, which is first released on the BCE's Web site and later in print.

The *Boletín Estadístico de la Deuda Pública Externa*, compiled by the MEF's SCP, is for internal use and is distributed to a limited number of users outside the MEF.

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

GFS are disseminated in the BCE publications which are identified with the BCE logo and identify the DGE as responsible for compilation. The sources of data (MEF, public sector entities, and the BCE) are also provided. This practice is also observed on the BCE's Web site.

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

Important methodological changes (e.g., in the institutional coverage of data) are disclosed to users through footnotes in the respective publications at the time the revised figures are first published. The BCE is aware of the importance of giving the public advance notice of methodological changes and is considering the adoption of such practice.

1.3 Ethical standards

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

Guidelines on staff behavior are established in the Civil Service and Administrative Careers Law of April 26, 1978 (Official Gazette, No. 574), which applies to all public sector employees. In addition, BCE staff are subject to a "Code of Conduct," which is an integral element of the BCE's *Normas para la Producción y Difusión de Estadísticas*. This document is available on the BCE's Web site. The guidelines on staff behavior include the obligation "to promote the professional and ethical use of statistical information" and "to protect the confidentiality of all information that can be broken down by individual or personalized and that has been made available to or placed in the custody of the institution."

2. Methodological soundness

2.1 Concepts and definitions

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

National concepts and definitions used in preparing GFS are generally consistent with those in the IMF's *GFSM 1986*. A plan has not yet been adopted for the transition from the GFS framework based on the *GFSM 1986* to the revised system recommended in the *GFSM 2001*. The authorities will in due course consider the timing of the migration and possible ways of achieving it. Meanwhile, the Western Hemisphere Department of the IMF has developed, in collaboration with Ecuadoran authorities, a balance sheet of public sector assets and liabilities. This work must be continued and will greatly facilitate adoption of the *2001 GFSM*. In this regard, it should be pointed out that publication of the Spanish edition of this manual and any training offered to the officials responsible for compiling

fiscal statistics in the MEF and BCE will be important factors affecting the transition to the new methodology.

The compilation of central government debt is based on national concepts and definitions that are not significantly different from international recommendations.

2.2 Scope

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

The structure of the NFPS is presented below to facilitate better understanding of GFS coverage:

1. Central government
 - 1.1 Legislative, jurisdictional, and executive functions (ministries, offices, and other bodies that are agencies of the country's central authority)
 - 1.2 Dependent entities
 - 1.3 Attached entities
 - 1.4 Special accounts
 - Sectional development fund (FODESEC)
2. Autonomous entities
 - 2.1 Ecuadoran Social Security Institute
 - 2.2 State Bank
 - 2.3 Sectional governments
 - 220 Municipal councils
 - 22 Provincial councils
 - 2.4 Universities and polytechnic schools
 - 2.5 Port authorities
 - 2.6 Other residual bodies
3. Nonfinancial public enterprises (NFPEs)

An understanding of the following national definitions relating to the institutional coverage of GFS in Ecuador is useful:

Nonfinancial public sector (NFPS): Central government, *rest of NFPS entities*, and nonfinancial public enterprises (NFPEs);

Central government: legislative, jurisdictional, and executive functions, dependent entities, attached entities, and FODESEC;

Rest of NFPS entities: State Bank, Ecuadoran Social Security Institute, sectional governments, universities, port authorities, and other residual bodies (Comptroller-General's Office, National Defense Board, Jipijapa and Paján Water Resources Board, and Welfare Board of Guayaquil);

Nonfinancial Public Enterprises: Petroecuador, Empresa de Ferrocarriles del Estado (ENFE), empresas menores, FLOPEC and TAME).

The GFS that are compiled and disseminated relate to the following national definitions: (i) nonfinancial public sector (NFPS), (ii) central government (i.e., budgetary central government), (iii) rest of NFPS entities (i.e., extrabudgetary units, social security funds, local governments, and some NFPE), and (iv) Nonfinancial Public Enterprises (NFPEs). Separate GFS data sets are not compiled for the consolidated central government (i.e., budgetary and extrabudgetary accounts and social security), local governments, and general government as recommended in the *GFSM 1986* although the source data are available.

The GFS currently compiled and disseminated reflect a broad institutional coverage. The reporting entities send monthly information to the BCE, with the exception of the sectional governments (i.e., local governments) and universities, which report annually. In these cases, the monthly data are estimated on the basis of the BCE's "Budget Execution System." Data are received from an average of 195 of the 220 municipalities and from the 22 provincial councils. When necessary, the data are estimated based on the last observation available and are replaced with final data when these become available.

The formats for presenting GFS differ from the tables recommended in the *GFSM1986* in terms of the level of detail, but the definitions and concepts are generally consistent. Information is available on revenue and expenditure, but data are not compiled on government financing and debt by debt holder and by instrument as recommended in the *GFSM 1986*.

The BCE publishes monthly data in a set of 10 tables contained in its *IEM* and on its Web site. Central government data, on a cash basis, include (i) its financial statement (revenue, expenditure, and financing transactions actually executed); (ii) current and capital revenues; (iii) expenditure by sector (function); and (iv) various deficit/surplus measures (global, budgetary, and primary).

The CBE monthly bulletin also provides data on the classification of revenue, expenditure by economic type, and deficit/surplus by quarter and by year on an accrual basis for the (i) central government; (ii) NFPS; (iii) rest of NFPS entities; and (iv) NFPEs. In addition, a table is included showing annual and monthly data on the stocks and flows of the central government domestic public debt. Data on the external public debt are presented in the balance of payments section of the *IEM*.

2.3 Classification/sectorization

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

The standards used for the classification, sectorization, and consolidation of GFS are generally based on the *GFSM 1986*. Also followed are the standards specified in: (i) the classifiers of expenditures and revenues issued by the MEF (Official Gazette, No. 234 of July 1993 and Official Gazette, No. 706 of May 1995, respectively), (ii) the Principles of the Financial Administration System, (iii) the Principles and Standards of Government Accounting, (iv) the General Catalogue of Accounts, (v) the Technical Budget Standards, (vi) the Budgetary Classifier of Revenue and Expenditure, and (vii) the Technical Standards for Government Accounting, Budget and Treasury (Official Gazette, No. 249 of January 2001) issued by the MEF.

GFS are compiled according to the national definitions and sectorization of the public sector described in Section 2.2 (i.e., NPFS, central government, rest of NFPS entities, and NFPEs), which are not fully consistent with the *GFSM 1986*. As noted, GFS are not compiled for the consolidated central government, local governments, and general government.

The sectorization of NFPE does not comply fully with international standards because the Port Authorities and the Jipijapa and Paján Water Resources Board are sectorized as government units (rest of NFPS entities). These entities are state-owned industrial units that sell goods and services to the public on a large scale and must be classified as NFPEs. It should be noted that the State Bank is classified in the public sector, as despite its name it does not engage in financial intermediation but rather makes loans to the public sector, primarily at the local level, out of resources from income and government transfers.

The classification of revenue and expenditure follows national criteria that are largely similar to those recommended in the *GFSM 1986*, but with some differences in presentation and less breakdown of major items. Central government revenues are first classified as “petroleum” or “nonpetroleum,” and the latter are then classified as “tax” and “nontax.” In general, a correspondence can be found between national classifications and those in the *GFSM 1986*.

The classification of expenditure is compiled by economic type and by function. For the former, total expenditure is classified as “current” and “capital,” and then each of these categories is broken down into major items that can be tied to the classification in the *GFSM 1986*. Regarding expenditures by function, it is noted that with the exception of debt service, sectoral distribution is estimated by the BCE using the statistical techniques described in Section 3.2.2. Financing is classified into domestic and external, but there is no classification by instrument and debt holder as recommended in the *GFSM 1986*.

Finally, in principle, the classification of financing and debt as domestic or external is based on the criterion of residence and not nationality. Therefore, by definition, domestic financing (flows) or debt (stocks) is that contracted on the domestic market and payable within the country, while external financing or debt is that contracted and payable abroad. However, it should be noted that no surveys are conducted to determine the residence of debt holders; consequently, the classification of financing and debt does not strictly reflect the residence criterion.

As in the case of financing, no data are compiled or disseminated on domestic and external public debt by type of instrument and debt holder. The *IEM* presents a summary with annual, quarterly, and monthly figures for the movement of the central government's domestic debt and external public debt; the latter appears in the balance of payments section.

It should be stressed that the SCP monitors the central government's external debt on a monthly basis and presents the results in *Boletín Estadístico de la Deuda Pública Externa* by creditor, debtor, and substitution with a one-month lag. This document is for internal use by the authorities and is distributed to a select group of users, such as some international organizations. The external debt data cover debt guaranteed by the government. The SCP also monitors domestic debt and compiles data for internal use only. Currently, the SCP is working on the resolution of issues related to the domestic debt restructuring implemented in October 1999, with a view to publishing information on domestic public debt in the future.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The basic information on flows and stocks submitted by the reporting entities that are used as the basis for preparing GFS are valued at current market prices. As of January 10, 2000, Ecuador has adopted the economic model of dollarization. Starting in February 2000, the exchange rate of 25,000 sucres to the dollar has been used to convert operations from sucres to dollars. The BCE has compiled a revised time series starting in 1990 based on the average selling exchange rate on the market in which the BCE intervenes (i.e., monthly average for monthly data, quarterly average for quarterly data, and annual average for annual data) to convert figures from sucres to dollars. Consequently, the dollar series are not consistent because the monthly figures do not add up to the quarterly figures, and the quarterly figures do not add up to the annual figures.

With respect to government debt, transactions are recorded at the time the borrowing takes place and on the dates when payments of principal and interest are made. Gross debt is recorded at face value.

2.4.2 Recording is done on an accrual basis.

The *GFSM 1986* recommends recording on a cash basis. According to that manual, GFS should be compiled based on transactions that have been effected, on the closest possible date to payment; in other words, prices used to value flows and stocks should reflect cash payments. The entities that make up the NFPS in Ecuador use mixed accounting—revenue on a cash basis and expenditure on an accrual basis. The Budget Law issued in November 1992 established that government entities are required to record expenditures in accrued values. For GFS purposes, the *IEM* shows central government on an accrual basis and the central government's financial position (the major GFS aggregates) on a cash basis. The latter is presented through a dataset showing revenues, expenditures, and various

deficit/surplus measures. GFS presented in the *IEM* for the NFPS and some of its subsectors (e.g., rest of NFPS entities, and NFPEs) are shown on an accrual basis.

It should be mentioned that the use of an accrual basis will facilitate migration to the *GFSM 2001*, which recommends recording on an accrual basis.

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

As recommended in the *GFSM 1986*, transactions are recorded in gross values, with the exception of financing transactions, which are presented net (borrowing received minus amortization payments). There are no corrective transactions.

Also, in accordance with the *GFSM 1986*, in compiling the GFS for the various subsectors of the NFPS, transfers delivered and transfers received among the units comprising a specific are netted. Thus, GFS represent a consolidation and not an aggregation.

3. Accuracy and reliability

3.1 Source data

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

Central government (monthly)

The basic sources of information used by the BCE to compile the GFS for the central government come primarily from the administrative systems for monitoring budget execution, and encompass all the entities covered by the 1992 Budget Law. The NFPS has been undergoing a process of decentralization in which greater autonomy has been granted to public entities, that is, they have discretion over fiscal spending (current and capital contributions). For this purpose, the MEF transfers the overall allocation from the national budget to the respective entities.

Up to the end of 2000, the “Savings-Investment-Financing Account” (CAIF) was used as the official source of data for central government revenue and expenditure. As of January 22, 2001, the information generated by the Integrated Financial Management System (SIGEF) officially replaced the CAIF as the source of data for central government. The CAIF, considered a very comprehensive data source, provided a full range of economic stocks and flows for compiling the GFS according to the guidelines in the *GFSM 1986*. The MEF continues to prepare the CAIF unofficially because the SIGEF does not allow expenditure data to be captured with the required level of detail.

The SIGEF will be implemented in stages and to date this system has been introduced in 22 of 70 institutions. Experience to date with the SIGEF is cause for concern among GFS

technicians and compilers, as this system has led to a large gap in the information that is considered very important for compiling GFS according to the criteria of the *GFSM 1986*. In line with the decentralization mentioned earlier, from the budget execution standpoint, the SIGEF records only the total amount of transfers to the ministries, autonomous entities, and local governments, without identifying the final use of the funds transferred, that is, its use for wages and salaries, purchases of goods and services, Ecuadoran Social Security Institute (IESS) contributions, and other payments. A limitation of the SIGEF is that it does not focus on detailed information on the structure of spending that could be obtained from spending government entities. As a result, the source of data for expenditures generated by the SIGEF is incomplete and inadequate for compiling comprehensive central government data because it does not identify current and capital expenditures broken down by budgetary item.

For the entities that do not yet have the SIGEF, spending is monitored on the basis of the previous “Savings-Investment-Financing Account” system. Under this system, each month the entities send in the “Periodic Cash Program” (i.e., what they require to meet their needs), and when the MEF allocates funds to them, it also identifies the expenditure categories for which the funds are intended.

In short, the SIGEF system has an accounting approach that does not facilitate the generation of source data required for GFS compilation and consequently for economic analysis. As mentioned above, to date the SIGEF has been implemented in 22 entities. It is essential that the system be fundamentally evaluated and that measures be taken as needed to adapt it accordingly before continuing with its implementation, so as to satisfy the information and analysis requirements of the MEF and BCE.

The BCE compiles and publishes monthly data on central government expenditures, by function, without using a specific source but rather on the basis of statistical techniques described in section 3.2. In this regard, it was noted that the MEF has data on expenditures by function that the BCE can use as a source for compiling GFS. It would be advisable that the necessary agreements be reached to establish the flow of this information from the MEF to the BCE on an official and regular basis.

In addition, the BCE produces monthly data on the government’s domestic debt based on direct budget information (“Debt Information”) it receives from the MEF, showing the payment of domestic interest and amortization. With respect to external public debt, the BCE obtains the information from the SIGADE statistical package that facilitates the monitoring of external debt by providers.

Nonfinancial public sector (quarterly)

As noted earlier, *IEM* presents GFS for the NFPS, central government, rest of NFPS entities, and NFPEs, on a quarterly basis, using the data sources described below:

Central government: Due to the limitations of the SIGEF, the MEF manually and unofficially compiles the source data for revenues and expenditures on an accrual basis.

Rest of NFPS entities: The BCE receives monthly information (budget execution, operation statements, etc.) directly from the entities, except from local governments and universities, which report once a year. The local governments send the information in hardcopy and do not use electronic media as few entities have managed to install automated communications systems. To compile the quarterly GFS for local governments and universities, the BCE's Fiscal Statistics Processing Unit obtains the source data from the "Budget Execution System", which tracks monthly revenue and expenditure on the basis of information from the banking system. As for institutional coverage, no surveys are conducted to collect data from local governments that do not report (usually insignificant compared to the total).

Nonfinancial public enterprises (NFPEs): The principal sources of information for the NFPEs are the financial statements and information on flows and stocks of domestic and external debt that NFPEs submit to the BCE each month. Most of the information needed to compile GFS is found in these sources.

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

The catalogues of accounts published by the MEF (i.e., the classifiers of revenues and expenditures issued by the MEF) are consistent with the classifications recommended in the *GFSM 1986*. However, there is no automatic mechanism to derive the GFS categories directly from the budgetary items. Moreover, due to the limitations of the SIGEF it is not possible to derive central government expenditures by budgetary item.

Source data for the "rest of the NFPS entities" are largely consistent with the *GFSM 1986* methodology and it is possible to obtain a breakdown of revenue, expenditure, and financing, by item and by account, as well as the reports needed for consolidation.

The time of recording and the valuation used in the source data are generally consistent with *GFSM 1986* concepts. The principal difference is that expenditures are recorded on an accrual rather than a cash basis, which is not considered a limitation but rather an advance in terms of the migration to the *GFSM 2001*.

3.1.3 Source data are timely.

The Public Sector Budget Law establishes the requirement that central government entities submit information to the MEF on the budget execution within 10 days of the end of each month. Despite the limitations with the SIGEF, the MEF strives to deliver monthly source data to the BCE on a timely basis. However, the MEF usually experiences delays in providing quarterly data (more detailed than the monthly submission) for central government expenditures to the CBE because it must compile the data manually due to problems associated with the SIGEF.

In practice, the “rest of the NFPS entities” submit the information for different periods and with some delay (generally 30 days after the end of the month) due to the lack of timely information on collections, bank delays in submitting credit notices and account statements needed for bank reconciliation. In the case of the IESS, the information is not timely and is late by 30-40 days because the IESS is decentralized into seven regional offices that do not submit data on a timely basis to facilitate consolidation of data for the institution. In the case of local governments, annual information is available 90 days after the close of the reference year, but the monthly information obtained from the “Budget Execution System” has a 15-day lag.

3.2 *Statistical techniques*

3.2.1 Data compilation employs sound statistical techniques.

GFS for the central government are complete in terms of institutional coverage. Consequently, no procedures have been established to estimate data omissions. This is not always the case for the rest of NFPS entities. Thus, if one such entity does not submit timely economic reports, the data are estimated on the basis of historical data and the annual budget. As for the local governments, the BCE receives information from the 22 provincial councils and from 195 of the 220 municipalities. This information is considered relatively complete as it covers the most important units. No surveys are conducted to obtain complete coverage, nor are reporting forms submitted to entities requesting information.

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

Generally accepted accounting techniques and statistical methods are, for the most part, used to adjust GFS. There is no complementary period. As mentioned earlier, the BCE does not have a source of data for the functional classification of central government expenditures published in its *IEM*, and it estimates the data based on the central government’s annual budget. The footnote on page 3 of the *IEM* indicates that the “sectoral distribution of expenditures, except for debt service, has been estimated” although it does not indicate the method used. The annual budget contains functions for which a link has been established with the 14 expenditure functions recommended in the *GFSM 1986*. Total expenditure is obtained by subtracting amortization and interest from total outlay. Expenditures in each function are derived as a proportion of total expenditure.

The MEF would be able to provide source data to the BCE on a regular basis and on a cash basis and an accrual basis for compiling monthly GFS for central government expenditure by function, if the BCE presents a formal request to the MEF.

3.3 Assessment and validation of source data

3.3.1 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 planning.

GFS compilers check source data to identify errors, whether numerical or involving changes in coverage or compilation procedures. However, there is no formal process to evaluate the accuracy of the information. It is not possible to check the accuracy of the data on central government expenditure generated by the SIGEF due to lack of knowledge regarding the system and the gaps it generates in the information. Though the source data for the rest of the NPFS entities are sufficiently detailed to facilitate review and analysis, the balance between timeliness and quality is not adequate. In short, the assessment and validation of source data are often restricted by the reliance on sources—most of which are compiled and transmitted manually—with different periodicities and often subject to delays and gaps in the information.

The data published in the *IEM* follow a regular cycle: first as provisional, then as semi-final data, and lastly as final. When an entity (usually from the rest of the NPFS) does not submit source data, the information is estimated based on historical data. The data are revised when new information becomes available. The GFS statement in the *IEM* is explained in a general note that applies to all the statistics included in that publication.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable.

There are various quality filters for validating the intermediate data; these are mainly in the form of electronic checks built into the fiscal data base maintained by the CBE. The information on revenue, expenditure, financing, and debt is routinely reconciled with information from other units of the DGE and with the MEF. For example, external debt is checked against the balance of payments; financing is checked against public entity deposits with the BCE; and expenditure is checked against the budgetary records of the MEF.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Discrepancies in the data are investigated. Depending on the results, the corresponding series are explained or corrected.

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

Work sessions are generally held to verify data, and information is crosschecked between the various macroeconomic sectors. Any substantial discrepancy between the deficit/surplus and financing, and between financing and changes in the debt are investigated and resolved.

3.5 Revision studies

3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

Revisions to GFS include all changes resulting from updated source data. The reliability of the source data is routinely evaluated, and the characteristics, causes, and magnitude of revisions are known to the compilers. No studies are done on GFS revisions.

4. Serviceability

4.1 Relevance

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

GFS have the same timeframe as that used in preparing and monitoring the budget. In addition, GFS constitute the principal statistics for decision making in the area of fiscal policy. The methodological base and the classification structure of GFS generally meet users' needs; however, user surveys are not conducted to determine with certainty the extent to which GFS adequately meet their requirements and needs. It is noted that GFS are not sufficiently specific and detailed to allow users to evaluate the extent to which the government is achieving the objectives of its social and fiscal policies. For example, as noted above, GFS on central government expenditures by function are estimated and not sufficiently detailed.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards.

Monthly data on central government operations are released no later than one month after the end of the reference month, that is, within the period stipulated by the SDDS. The annual data on operations of the NFPS are released 180 days after the reference year. It should be pointed out that in practice the periodicity and timeliness requirements of the SDDS are exceeded with respect to the NFPS, as quarterly data are published in the IEM with a 3-month lag.

Quarterly data on central government debt are published one quarter after the end of the reference period. As in the case of the NFPS, in practice the requirements of the SDDS are exceeded, as monthly data are published in the *IEM* with a 1-month lag.

4.2.2 Periodicity follows dissemination standards.

In observance of the SDDS, monthly data are published on central government operations, annual data are published on the operations of the NFPS, and quarterly data are published on central government debt. However, as mentioned above, in practice the requirements of the SDDS for the NFPS and central government debt are exceeded.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset (e.g., accounting identities observed).

GFS are consistent with generally accepted accounting standards and follow the recommendations of the *GFSM 1986*. Consequently, the various accounting identities (deficit/surplus = financing, principal components = sum of the components, functional expenditure = expenditure by economic type, domestic financing = changes in domestic debt, external financing = change in external debt, and transfers paid = transfers received) are observed in GFS, except for central government transfers (i.e., transfers paid and transfers received).

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

GFS are consistent with expected trends and reflect discretionary changes, external shocks, and economic activity. There are no breaks in the series attributable to methodological changes.

Until 2000 it was possible to reconcile monthly, quarterly, and annual figures because all the data were maintained in sucres (the national currency). In January 2001, the dollar was introduced as legal tender, and the time series were adjusted to the new payments system. The BCE has compiled a revised time series starting in 1990 based on the average selling exchange rate on the market in which the BCE intervenes to convert figures in sucres into dollars. Consequently, the dollar series are not consistent in the sense that the monthly figures do not add up to the quarterly figures, and the quarterly figures do not add up to the annual figures.

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

GFS can be reconciled with balance of payments data. Source data on external public debt for both GFS and the external accounts are obtained from SIGADE (a common data source). GFS on domestic debt are obtained from the MEF but are crosschecked with data generated by the BCE's General Banking Directorate.

There are discrepancies between GFS and the national accounts (NA) due to differences in data sources (NA use operating statements (net worth), and GFS use budget execution), basis

for recording (NA use accrual basis, and GFS use cash basis), and institutional coverage (NA cover semipublic enterprises (public and private capital), while GFS cover only NFPEs).

The monetary and fiscal accounts are not fully reconciled, mainly because GFS record flows (transactions) except for debt, while monetary accounts records stocks (positions at the end of the accounting period). However, GFS are crosschecked against the monetary accounts to determine whether the data on central government deposits in deposit institutions are consistent.

4.4 Revision policy and practice

4.4.1 Revisions follow a regular, well-established, and transparent schedule.

GFS are published following a regular and well-established schedule according to which data disclosed for the first time are preliminary and later changed to final data. Revisions do not follow an established and transparent schedule. However, major revisions occur when the reporting entities submit revised information. In general, revisions are also reported the month following publication of the preliminary data.

4.4.2 Preliminary data are clearly identified.

Preliminary and revised data are not clearly identified but are announced in a general note in the *IEM* (for example, in issue No. 1801 of March 31, 2002: “The statistics for the period 1992-1999 are final, those for 2000 are semifinal, and those for 2001 and 2002 are provisional”). The revised data are published in the same media and with the same level of detail.

4.4.3 Studies and analyses of revisions are made public.

Comparative analyses of preliminary and final data are neither prepared nor 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).

GFS are generally compiled and disseminated according to the recommendations of the *GFSM 1986*. The presentation of the data may help users to identify and compare the principal GFS aggregates and to monitor fiscal policy. In addition, time series are provided for at least one decade, as are charts. However, the presentation of the information is not optimum because:

(i) The emphasis in the GFS compiled and disseminated is on NFPS, central government (budgetary), rest of NPFS entities, and NFPE, and not on general government which is the institutional coverage recommended in the *GFSM 1986*. Although the current presentation is very useful, the inclusion of GFS for the general government would further facilitate user understanding and international comparisons.

(ii) the classification of revenue, expenditure, financing, and debt follows national criteria that, in general, similar to those recommended in the *GFSM 1986* but with differences in presentation. A link can generally be established between the national classifications and those recommended in the *GFSM 1986*, but it requires access to detailed information which is not available to the public.

(iii) No classifications are disseminated of financing and debt by type of debt holder and by type of instrument as recommended in the *GFSM 1986*.

5.1.2 Dissemination media and formats are adequate.

Monthly, quarterly, and annual GFS are disseminated on the BCE Web site and in its *IEM*, a monthly publication of the BCE. In addition, annual GFS are published in the Annual Bulletin (*Boletín Anuario*) and in the Annual Report of the BCE.

5.1.3 Statistics are released on a pre-announced schedule.

GFS are disseminated following a schedule announced in January of each year on the BCE Web site. This schedule shows the exact release dates for the BCE's economic publications. In addition, the *IEM* contains an explanatory note on the availability of an advance schedule for release of data on the Dissemination Standards Bulletin Board (DSBB), on the IMF's Web site.

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

There is no preferential treatment of users. GFS are disseminated at the same time to all interested parties on the date indicated in the release schedule on the BCE Web site. Subsequently, GFS are available to all users in hardcopy.

5.1.5 Nonpublished (but nonconfidential) subaggregates are made available upon request.

Nonpublished, nonconfidential disaggregated data are provided on request.

5.2 Metadata accessibility

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

The *IEM* contains a short methodological summary of fiscal statistics. The second edition of *Metodología de la Información Estadística Mensual* [Methodology of Monthly Statistical Information], issued by the BCE in 1997, contains a description of the structure of the NFPS and concepts used in GFS compilation. This document can be obtained from the BCE's Publications Department. In January 2001, the BCE's DGE prepared a "Workbook on Government Finance Statistics in Ecuador: 1971-1999," which includes more extensive methodological notes on GFS (cash basis) and on the structure and evolution of these data. This publication also includes historical data for various levels of government, including local governments and general government. However, there are no detailed metadata available to the public on the sources of data and statistical techniques used in compiling fiscal statistics.

Recently, a methodological note was added to the BCE Web site that describes, although not extensively, the coverage, classification, and other characteristics of the GFS for the central government and the NFPS and cites the *GFSM 1986* as a source. If feasible, it would be advisable to supplement this information with bridge tables showing the links between the source data and GFS.

It should be mentioned that as an SDDS subscriber, Ecuador disseminates on the IMF's DSBB "metadata" (i.e., information about the data, including some methodological summaries) on the central government, the NFPS, and government debt, prepared by the Ecuadorian authorities. It was noted that the summary methodology for the public debt has not yet been submitted, and that in some cases the metadata need to be revised and updated.

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

As mentioned earlier, there is no detailed document for public use that describes the concepts, sources, and methods used in compiling GFS. Users may require more information to evaluate the qualities and deficiencies of GFS. In these cases, queries regarding the methodology can be made by contacting the BCE through the Internet.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized.

Neither the BCE Web site nor the respective publication provides the name of a contact person, telephone number, and e-mail address to which queries regarding GFS may be directed. However, the name of a contact person is provided in the metadata for Ecuador posted on the IMF's DSBB. The BCE offers services to data users primarily through a

mailbox directed to the electronic address of an employee in the DGE of the BCE, who channels queries to the pertinent area of the BCE. The “contact person” functions rotate among DGE employees. Although the BCE does not monitor assistance to users through periodic surveys, BCE policy is to respond to all electronic mail it receives.

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

Each year the BCE prepares publications catalogues that contain the cost of each publication. Catalogues are sent to subscribers but are not available on the BCE Web site.

**Table 5. Ecuador: Data Quality Assessment Framework
Government Finance Statistics Summary**

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
0. Prerequisites						
0.1 Legal and institutional environment			X			The framework permits certain duplication of responsibilities.
0.2 Resources			X			Staffing is insufficient and there are clear training needs.
0.3 Quality awareness			X			There are shortcomings in the procedures for data quality assessment.
1. Integrity						
1.1 Professionalism		X				Major changes in methodology are not announced in advance.
1.2 Transparency			X			
1.3 Ethical Standards		X				
2. Methodological Soundness						
2.1 Concepts and definitions			X			A transition path to the <i>GFSM 2001</i> has not been articulated.
2.2 Scope			X			Separate GFS are not compiled for consolidated central government, local governments, and general government although source data are available.
2.3 Classification/sectorization			X			Sectorization is not fully consistent with international recommendations. Financing and debt by debt holder and instrument do not conform to the classifications recommended in <i>GFSM 1986</i> .
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data				X		Problems with the new financial management system (SIGEF) complicate the compilation of expenditure by the central government. Source data for other institutions in the NFPS are often subject to delays and gaps in the information.
3.2 Statistical techniques			X			Expenditure by function is estimated and not revised using available final data.
3.3 Assessment and validation of source data			X			Source data are assessed and validated manually.

**Table 5. Ecuador: Data Quality Assessment Framework
Government Finance Statistics Summary**

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
3.4 Assessment and validation of intermediate and final output data		X				No revision studies are performed.
3.5 Revision studies					X	
4. Serviceability						
4.1 Relevance			X			There are no formal procedures for consulting users.
4.2 Timeliness and periodicity		X				
4.3 Consistency			X			There are inconsistencies between the monthly, quarterly, and annual data for 1990 to 2000. Coordination is needed to improve consistency with other statistical frameworks.
4.4 Revision policy and practice				X		
5. Accessibility						
5.1 Data accessibility			X			Lack of data for general government hampers understanding of GFS and hinders international comparisons.
5.2 Metadata accessibility			X			
5.3 Assistance to users		X				
						Metadata in the public domain do not include sufficient documentation on methodology, data sources, and statistical techniques.

Note: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Not-observed; NO = Practice Non-observed.
Comment: Only if different from O.

VI. MONETARY STATISTICS

Prerequisites of quality

0.1 *Legal and institutional environment*

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

The financial system of Ecuador is governed by the Constitution of the Republic of Ecuador (Chapter 5, Articles 261-265) and the laws and regulations cited below with their respective amendments and additions: Law on the Monetary System and the State Bank of May 7, 1992; Monetary Board Resolution JM 626-BCE of May 13, 1997, which issues the Standards for the Production and Dissemination of Statistics; the Law for the Economic Transformation of Ecuador of March 13, 2000, Article 1(d); the Organic Law of the Central Bank of Ecuador approved by Executive Decree 1589 of June 27, 2001; and the Law on Financial System Institutions of October 2001 (which updates the General Law on Financial System Institutions of May 12, 1994).

One of the functions of the BCE is the compilation and dissemination of summary statistics, including money and banking statistics. The legal basis for the production and dissemination of statistics essentially rests on Monetary Board Resolution JM 626-BCE of May 13, 1997, approving the BCE's standards for the production and dissemination of statistics and the Organic Law of the BCE. Annex 1 of the Resolution includes among the statistical responsibilities of the Central Bank the compilation of money and banking aggregates. As established in Article 2 of the Resolution, before January 21 of each year the BCE is to define its Statistical Information Policy. Article 4 establishes that within the period indicated in Article 2 of the Resolution, the BCE shall publish for general knowledge the Data Dissemination Criteria applicable during the calendar year in question. This document indicates the documentary bases, the coverage, and the release dates of the institution's publications.

As provided by the Organic Law of the BCE, approved in Executive Decree 1589 of June 27, 2001, part of the sphere of action of the General Directorate of Studies is the compilation and development of basic and macroeconomic summary statistics for national and international use. In the same Law, the section on the mission of the Directorate of Economic Statistics also refers to the task of cataloguing monetary and financial statistical indicators.

The Law for the Economic Transformation of Ecuador of March 13, 2000 in its Article 2(d) entrusts to the BCE, as regulator of the monetary system, the task of disseminating the BCE's systems of balances.

The Directorate of Economic Statistics (Money and Banking Statistics Section) is the unit responsible for revising methodologies, gathering and compiling information, and processing

and disseminating monetary and financial statistics. Within the BCE there are adequate mechanisms to ensure the flow of basic information between the Financial Directorate (Financial Reporting and Budget Sections) and the Directorate of Economic Statistics (Money and Banking Statistics Section). The Financial Reporting Section provides the basic data for the central bank survey to the Money and Banking Statistics Section.

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

The data from financial system institutions are collected in coordination with the Superintendency of Banks (SB), which routinely supports the BCE in information gathering. Title XII of the Law on Financial System Institutions establishes the organization and functions of the SB as the technical and autonomous body that supervises and monitors public and private financial system institutions as well as insurance and reinsurance companies.

The BCE and the SB signed an inter-institutional cooperation agreement on April 17, 1997 that provides for the sharing of financial information. An Inter-institutional Coordinating Committee was created to organize activities for achieving the objectives proposed in the agreement. According to the agreement, financial institutions send information to the SB through the BCE electronic mailbox. In turn, the SB must send the BCE, in the appropriate format and with the established periodicity and timeliness, statistical information that the Central Bank uses in carrying out its tasks of compiling and disseminating financial system statistics. For its part, the Central Bank receives statistical information daily from the financial system and supplies it to the SB.

Meetings are held between the BCE and SB to analyze the information coming from the system to both the SB and the BCE so as to avoid duplication in the sending of information. In addition, the need of informing the Central Bank of Ecuador for the compilation of statistics has been constantly stated.

The information on existing interest rates in the financial system and the international reserves statistics are compiled by the Money and Banking Statistics Section.

The timeliness of the information is guaranteed through the provisions in the Coding of Central Bank of Ecuador Board Regulations, Book I (Monetary-Credit Policy), Title One (Open Market Operations), Chapter IV (Information Requirements).

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

The standards for the production and dissemination of statistics establish that individually compiled , whether received from individuals or from legal entities, are considered strictly confidential and used exclusively for statistical purposes. To guarantee the respondent's rights, the BCE disseminates any standards it adopts in this regard, as well as the laws and other legal instruments that govern statistical activities. The provisions of the Central Bank Board include obligations with respect to the provision of information by respondents as well as penalties for noncompliance (institutions that fail to send the information cannot gain

access to the Central Bank's open market operations, nor to the operations of the Liquidity Fund).

In addition, communications sent to request information include a reminder that the Central Bank of Ecuador's rule is to protect the confidentiality of information, using it solely for statistical purposes and presenting results in the form of aggregates or indicators.

Article 92(m) of the Law on the Monetary System and the State Bank of May 7, 1992, empowers the General Manager of the Central Bank of Ecuador to dismiss any member of staff disclosing confidential information on matters taken up in the Monetary Board or in the Central Bank or taking advantage of any information for personal purposes or to the detriment of the central government, the Central Bank or third parties.

The computerized system used to compile monetary statistics ensures that the information disclosed is on an aggregate level and not individualized. Access to individual data is restricted solely to personnel who need that information to carry out their professional activities.

Individual information is restricted for those professionals who do not need it. These procedures are a subset of the computing process that allows access to the information network.

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

The timeliness of the information is guaranteed through Article 91(c) of the Law on Financial System Institutions, which establishes that the reports requested by the BCE Board and by the BCE itself are an exception to the bank secrecy prohibition. The request for that information is transmitted through the SB.

The reporting of data is also supported in Book I (Monetary-Credit Policy), Title I (Open Market Operations), and Articles 1 and 2 of Chapter IV (Information requirements). Article 1 establishes that private banks, private financial corporations, mutual housing savings and loan associations, savings and loan cooperatives, credit card companies, the Ecuadorian Housing Bank, and the National Financial Corporation are required to submit to the SB by electronic mail their daily consolidated balance sheets according to a format designed on magnetic media. These institutions must send the balance sheets to the SB by 1:00 p.m. each day through the BCE electronic mailbox. The data must be sent not later than forty-eight hours after the cutoff date for the balance sheet in question.

There have been no problems indicating conflicts of interest and complications in capturing basic information for compiling monetary statistics. The BCE asks for and usually obtains the support of the SB for collecting information. Prior to adoption of the dollarization policy, when financial institutions failed to supply information, the BCE would block their access to open market and exchange operations starting on the business day after the day they failed to

send information and continuing until the next business day on which the institution met its obligation. Private banks are also required to send information on offshore institutions and financial groups to the BCE mailbox.

The BCE provides adequate support to the respondent financial institutions for preparing and submitting forms. Continuous contact is maintained with the respondents to obtain better results in terms of information quality. Whenever additional information has been requested, training workshops have been set up with the respondents on the need for information and how to send the data. In the Central Bank, the Capture and Basic Statistics Section and the Money and Banking Statistics Section are in constant communication with reporting financial institutions to ensure continuous improvement in information quality. In turn, the statistics that are compiled are made available to the respondents.

0.2 Resources

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

In the Money and Banking Statistics Section, which is devoted exclusively to the compilation of monetary and financial statistics, there are four professionals (two economists and two university graduates, one in economics and one in statistical engineering). Each staff member has a personal computer and direct access to the Internet.

The human resources directly involved in the process of compiling information are somewhat insufficient for the tasks assigned. The staff has an average of six years' experience in the unit, and it is estimated that an average of two years' experience is needed to acquire sound knowledge of the concepts and established practices. There is a rotation of functions, special studies are sometimes conducted, and reports are presented on the development of methodologies. The section also participates actively in the BCE's strategic plan for the new financial architecture and in the project to develop early warning indicators.

All staff in the Money and Banking Statistics Section have participated in the Monetary and Financial Statistics course organized by the IMF and CEMLA. The guidelines distributed at such times have been incorporated in the compiling of monetary and financial statistics, along with the recommendations from technical assistance provided by the IMF Statistics Department. Given the current monetary approach (dollarization), the technical staff of the Money and Banking Statistics Section need more technical assistance and training on specific subjects, particularly subjects relating to the definitions of money.

Despite the financial limitations currently faced by the BCE, the computer resources used in gathering and compiling monetary statistics are considered adequate. There is a highly computerized compilation system. The computer program used is developed in Power Builder, a modern tool that works with Windows and a SYBASE database. All the reporting financial institutions submit their balance sheets daily through an electronic mailbox. There are no budgetary restrictions that limit the collection and compilation of information. The

Central Bank is currently carrying out a project to obtain better quality source information and coverage from the financial system (Sectorization Matrix Project). This project involves Bank training for the respondents and moving technical staff physically from the BCE to the financial institutions to observe and support development of the project.

0.2.2 Measures to ensure efficient use of resources are implemented.

The budget is allocated within the framework of the BCE Strategic Plan. The Directorates identify their budgetary needs and submit them to the BCE Board between October and November. The BCE Board approves the budget in January of the following year. There is continuous monitoring of budget execution. Budget management is decentralized at the process level.

The approach of the General Directorate of Studies is to carry out its work while seeking continuous improvement. In addition, better computing tools are constantly being used to optimize and improve the products prepared in the monetary statistics unit. At various times, the IMF has provided technical assistance on statistical methodology, and the results and observations continue to be incorporated in information processing.

0.3 Quality awareness

0.3.1 Processes are in place to focus on quality.

The BCE recognizes that the quality of statistics is essential for accurately analyzing the economic situation and promoting user confidence in the data. Automated databases have not been developed for cross-checks of information, but the quality of monetary and financial statistics is constantly evaluated by the BCE data compilers and by the analysts who prepare the periodic reports issued by the Directorate of Economic Policy and Analysis.

The General Manager of the BCE conducted a survey, a couple of years ago, of external users to evaluate the BCE's image. The results indicated that the compilation of reliable statistics is one of the BCE's strengths.

An external company audits the BCE's financial statements.

0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics.

There is no body that provides advisory assistance on information quality, but the Monetary Statistic Section is aware of the problems that still exist in compiling the data and that can be identified in the various phases, from the collection of data to its dissemination. In this context, the section is carrying out a project to make it possible to obtain basic information of better quality and coverage in terms of the sectorization of accounting records, which will improve the quality of monetary and financial statistics. The Monetary Statistics Section is also aware that various financial institutions do not provide all the information requested, as

in the case of the banks in the process of liquidation whose assets and liabilities were absorbed by the Deposit Insurance Agency (AGD).

A survey of internal and external users was conducted some time ago regarding statistics in general. Internal users are often approached for their information requirements, and information quality is assessed. For example, direct contact is maintained with the technicians in the Directorate of Economic Policy and Analysis, who are frequent users of monetary statistics.

0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.

The managers of the BCE recognize the tradeoffs between the various aspects of data quality. Given these tradeoffs, which are infrequent, the Director of Economic Statistics and the Director of the General Directorate of Studies are usually consulted on the advisability of disseminating data on a timely basis with the risk of diminishing the quality of the information.

As Ecuador is a subscriber of the SDDS, timeliness is recognized as a requirement of the SDDS. The BCE publishes some monetary and financial statistics as preliminary, presenting them later as final, following verification. The revision criterion consists of keeping the data as preliminary for three months after the reference period before making them final. The status of the data is clearly identified in the publications.

Internal users are frequently approached for their information requirements, and the quality of the information is assessed. External users who feel that the indicated procedures are not the most suitable are free to communicate their disagreement in writing to the BCE General Management Office. For their part, the technical units of the BCE may clarify and correct the misinterpretation or misuse of data.

1. Integrity

1.1 Professionalism

1.1.1 Statistics are compiled on an impartial basis.

Article 70 of the Law on the Monetary System and the State Bank defines the Central Bank as an autonomous technical body that executes the monetary, financial, credit, and exchange policy of the Republic. Article 92(m) of the same law empowers the General Manager of the Central Bank of Ecuador to dismiss any member of staff disclosing confidential information on matters taken up in the Monetary Board or in the Central Bank or taking advantage of any information for personal purposes or to the detriment of the central government, the Central Bank or third parties.

The Organic Law of the Central Bank establishes the term of the directors, how they should be replaced, and provisions for alternates.

The BCE promotes professionalism among those who compile statistics through their participation in courses and conferences, and meetings with compilers in international organizations. The BCE encourages staff to conduct methodological studies. When substantial changes occur, the BCE promotes national meetings, conferences, and workshops. In addition, the General Directorate of Studies maintains various publications that detail the methodological aspects of statistics (in the *Cuadernos de Trabajo* [Workbooks] series), present the results of research (technical notes), and publish seminar papers and the work of national and foreign economists concerning current subjects (economic issues). Researchers' papers are always submitted to an editorial board before being published, although this does not mean that freedom of thought is inhibited.

1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.

The choice of source data is based exclusively on statistical considerations. The definitions and methodologies used satisfy the need for information on monetary and financial activities on which monetary authorities make their decisions. The disseminated data are based on methodologies consistent with international methodologies.

The BCE encourages staff members to disclose, in the documents they prepare, the rationale for the methodologies used, both on the BCE's Web page and in its various publications.

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

The technical units of the BCE are allowed to respond to misinterpretation or misuse of the data, and thus on occasion observations and clarifications have been issued in the media and in specialized publications. Workshops have been held for journalists to clarify the handling of information and changes in the methods for calculating monetary statistics.

1.2 Transparency

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

The public has access to the legislation that governs the collection, compilation, and dissemination of monetary statistics. The Law on the Monetary System and the State Bank of May 7, 1992, and the amendments thereto set forth in Legislative Resolution 22-058, published in the Official Gazette, No. 280 of March 8, 2001; the General Law on Financial System Institutions of May 12, 1994; Monetary Board Resolution JM 626-BCE of May 13, 1997; the Law for the Economic Transformation of Ecuador of March 13, 2000; and the Organic Law of the Central Bank of Ecuador approved by Executive Decree 1589 of

June 27, 2001 are available to the public on the BCE Web page and are sold at the Economic Publications Department, the SB, and bookstores.

A summary of the methodology for calculating monetary statistics has been disseminated in the *Boletín Estadístico Mensual* [Monthly Statistical Survey]. In addition, the same survey indicates that a more in-depth breakdown of the theoretical basis and methodology can be found in *Cuaderno de Trabajo* No. 127, “Monetary and Financial Statistics of Ecuador: Methodological Notes and Results.”

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

No government agency other than the BCE has access to the statistics prior to their publication. Data are released simultaneously to the public and to the authorities. In the case of monetary and financial statistics, the BCE is the only institution responsible for compiling and disseminating information.

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

Monetary and financial information published by the BCE is identified with the BCE logo. In addition, the source of the basic data and the agency responsible for compiling the information is cited at the end of each statistical table.

The BCE does not explicitly request that its work be recognized when its monetary statistics are reproduced or used by third parties.

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

No advance notice is given of changes in methodology. Users are advised of any change in methodology or compilation when the data are published.

1.3 Ethical standards

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

The rules for staff behavior are contained in the Codified Regulations of the Integrated Human Resources Administration of the Central Bank of Ecuador, issued through Monetary Board Regulation JM-592-BCE of June 11, 1996.

The objective of the human resources regulations is precisely for ethical standards and human resources to be governed according to technical parameters and for political interference to be avoided.

Staff members are also advised of ethical standards, for handling information, through administrative resolutions, working meetings, and electronic mail. There are various resolutions of the General Manager concerning the handling of information.

Each new BCE employee receives a week-long induction to the institution. During that week the new staff is informed of the Bank's fundamental responsibilities and its regulations. At the end of the week, the new employee must sign a contract agreeing to honor the institution's regulations.

2. Methodological soundness

2.1 Concepts and definitions

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

The concepts and definitions used by the BCE to compile and present monetary and financial statistics are generally consistent with the guidelines established in the IMF's *Monetary and Financial Statistics Manual* (MFSM), such as the concepts on valuation of financial assets at market prices, accrual basis accounting, and presentation of assets and liabilities in gross terms. The sectorization of the economy is based on the guidelines in the 1993 *System of National Accounts* (1993 SNA) and the IMF's MFSM. However, sectorization in the accounting records for the financial system balance sheets is now being adapted.

The monetary system, in accordance with the reforms introduced in March 2000 in the Law for the Economic Transformation of Ecuador, is based on the principle of unrestricted circulation of foreign currency in the country and the freedom to transfer it abroad. This law establishes that the Central Bank of Ecuador is not authorized to issue new sucre banknotes, except for minting coins, which may enter into circulation only in exchange for sucre banknotes in circulation or United States dollars. In effect, the sucre exchange process ended in June 2001.

Consistent with the MFSM, the BCE compiles the central bank sectoral balance sheet, which includes the principal assets and liabilities. The central bank balance sheet is compiled daily and monthly and published weekly and monthly as "Monetary Accounts of the BCE."

In this statistical framework, assets are defined as: **1. net external assets**. These assets consist of **a.** freely usable international reserves (highly liquid assets with nonresidents) with a high degree of immediate availability and **b.** other external assets that are financial instruments with less liquidity, denominated in foreign currency against a nonresident agent. The BCE includes nonmonetary gold under available international reserves. This nonmonetary gold refers to gold that the BCE purchased from the private sector in the past. Given that this gold meets all the purity and fineness requirements of monetary gold and is also used to carry out financial operations with foreign institutions, it will be necessary to classify it as monetary gold. In the MFSM, nonmonetary gold is classified as transactions in

nonfinancial assets. **2. net domestic assets.** These assets consist of net credit to the central government, net credit to social security funds, credit to the financial system (monetary corporations, other depository corporations, and financial intermediaries) and to the private sector, and unclassified net assets.

Financial liabilities consist of coins issued in exchange for U.S. dollars, compulsory and voluntary deposits of the public and private financial system in the Central Bank of Ecuador, and monetary deposits of local governments, nonfinancial public corporations, and private sector corporations in the Central Bank of Ecuador.

The monetary survey is the consolidation of the accounts of the Central Bank of Ecuador and depository monetary corporations (commercial banks and the National Development Bank). The financial survey is the consolidation of the monetary survey, the monetary accounts of other depository corporations, and other financial intermediaries (OFI).

Reporting of the analytical accounts of the financial survey is monthly, is presented in stock in millions of dollars, and presents a broad definition of money. The following aggregates are derived from the analytical accounts of the financial system:

Currency in circulation: Coins issued by the Central Bank of Ecuador and in the hands of the public.

Demand deposits: As part of the broad definition of money, includes private sector demand deposits in the banking system, monetary deposits of nonfinancial public corporations (enterprises), and local government deposits in the Central Bank of Ecuador.

Quasi money: Includes savings, term, restricted, repurchase, and other deposits.

Because Ecuador's economy is developing under the dollarization system, issuing of national currency ceases to be a function of the Central Bank, except for the limited amount of coins in circulation. As a result, the management of traditional monetary aggregates has ceased to provide useful indicators for economic policy. Similarly, given the difficulty of measuring the amount of dollars circulating in the economy from different revenue sources, the money supply (M1) cannot be calculated.

The Monetary and Banking Statistics Section has been receiving technical assistance from the IMF Statistics Department since 1999, in order to improve the quality of statistics. Recommendations are being incorporated both from the missions and from the MFSM guidelines. However, to improve the statistics, the source data from financial institutions will have to be appropriately sectorized. A sectorization matrix for the accounting records of financial institutions is being implemented for this purpose and is expected to be operational this year. Currently, workshops are being conducted with financial institutions to inform them of the objectives of the project and how the banks could adapt their systems to meet the requests from the Central Bank of Ecuador.

2.2 *Scope*

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

The financial system is comprised of a large variety of financial intermediaries operating under various strictly regulatory, legal, and institutional schemes. The financial sector encompasses: (1) the BCE, (2) the monetary corporations (commercial banks and the national development bank), [(3)] other depository corporations (ODCs—mutual associations, financial corporations, savings cooperatives, and the Ecuadorian Housing Bank), and [(4)] other financial intermediaries (OFIs—National Financial Corporation (CFN) and credit card companies). Currently, the financial system is made up of 22 commercial banks operating normally, 12 banks under liquidation and under the administration of the Deposit Insurance Agency, and one bank under state administration.

Also part of the financial system are six offshore banks located in the Bahamas, the Netherlands Antilles, the Cayman Islands, Panama, and Montserrat. The subsidiary offshore entities of operating Ecuadorian banks must adhere to the same standards of financial solvency and prudence that govern financial institutions, particularly with respect to capital adequacy levels, asset rating, compliance with limits on the concentration of credit and investments, and reporting required by the Superintendency of Banks. The controlling onshore financial institution must answer for the asset losses of its offshore subsidiary up to the value of its own assets, this being understood as up to the amount invested in that institution. In addition, offshore affiliates must submit to the Superintendency of Banks of Ecuador any internal control manuals they may have on policies and standards to prevent operations that are considered illegal. If the investment of an onshore financial institution exceeds 20 percent of the share capital of any entity established abroad (including those established in offshore centers), the latter must provide the same information to the Superintendency of Banks with the same periodicity as is required of the onshore entity.

Given the very characteristics of the offshore units of Ecuadorian commercial banks, it would be very advantageous to have periodic and timely information on the volume of credit and deposit transactions they carry out with residents. It would be useful to develop a monetary survey of these entities and present it in addition to the statistics that are already published.

The monetary survey is based on the consolidation of the monetary accounts of the BCE and the monetary depository corporations, which must have a similar statistical framework from a conceptual point of view to facilitate the consolidation of their components. In the case of monetary corporations, the institutional coverage includes the activities of the parent company and all its national branches.

An analytical statement for the ODCs is presented to identify the contribution of this sector in the definition of broad money. As a subsector, the ODCs include financial institutions that collect funds from the public through deposits or any other form of collection that is not easily transferable, such as savings and time deposits, that is, they do not manage the public's

current accounts. Although information is gathered from the savings and loan cooperatives, it has not yet been possible to incorporate them in [ODC] surveys. The corporations and quasi-corporations included cover 97 percent of the operations of the system at the national level.

Although information is gathered from savings and loan cooperatives, it has not yet been possible to incorporate these in the monetary surveys. However, included corporations and quasi-corporations cover 97 percent of the operations of the system at the national level. A new catalogue of accounts for the financial system (Superintendency Law) will take effect in July 2002. In general terms, the new financial system chart of accounts is basically directed toward improving the techniques of analysis, monitoring, and banking supervision. The OFI accounts correspond to the consolidation of information coming from nondepository entities but are important in the intermediation of overall credit (credit cards, CFN). Insurance companies and financial auxiliaries have not yet been included with the OFI accounts. The lack of staff means that projects are now focused on improving the quality of information from the financial corporations.

The financial survey is the consolidation of the accounts of the entities that make up the financial system, that is, the consolidation of the monetary survey with the accounts of other depository corporations and other financial intermediaries, for the purpose of measuring overall credit and liquidity. The financial survey describes the activity of the entire financial system with a degree of detail similar to that of the monetary survey accounts, eliminating transactions and positions between financial entities.

2.3 Classification/sectorization

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

In the dollarization scheme, the criterion of residence is very important in the classification of financial transactions.

Sectorization differentiates resident sectors according to the definition and the criteria used in the *MFSM*, the *1993 SNA*, and the fifth edition of the *Balance of Payments Manual (BPM5)*, and the resident units are then classified into four sectors: central government, nonfinancial public corporations, financial corporations, and the private sector. The private sector consists of private companies and nonprofit institutions serving households. For households, the sectorization of the economy in Ecuador is quite close to international criteria. However, there are still problems collecting the basic information. For this reason, the Central Bank is developing a project to adopt the Financial System Accounting Records Sectorization Matrix to improve the account sectorization of the balance sheets. This project is parallel to the adoption of the new catalogue of accounts that will be adopted by the financial system in July 2002.

The system used to classify financial instruments in the balance sheets is based on the degree of liquidity of the instrument and the legal characteristics that describe the basic relationship

between creditors and debtors. Repurchase operations appear as collateralized credit operations. Swap operations do not involve a reduction in the gold reserves. They are used as collateral only in the BCE's operations with the rest of the world and recorded as monetary reserves liabilities. Repurchase agreements appear as collateralized credit operations.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

The financial assets valuation principle is generally applied. Financial assets and liabilities valuation practices are based on the single catalogue of accounts that financial corporations must use.

Article 1 of the Law for the Economic Transformation of Ecuador states that all the freely usable international reserves must be recorded at market value and in accordance with internationally accepted accounting practices. Gold, when part of reserve assets, is valued daily at market prices as recorded on the London market (p.m. fixing). Financial institutions value nonmonetary gold at market prices as quoted in London.

Securities are generally valued at market price, which is set daily as quoted in the stock market. Loans are valued at the face value of the claim issued. The various share securities are valued at market price or at the present value of future cash flows generated by the securities held by the monetary depository corporations and are classified according to the accounting rules established by the SB.

Financial assets and liabilities that are not valued at market prices are adjusted to the purchase values, with efforts made to establish fair values or reasonable prices.

The value of capital loans is recorded in the portfolio. Interest is recorded on an accrual basis. Provisions for past due portfolio are not included as credits. Each quarter, and based on asset rating and real expectations that credits will be collected, a provision is estimated and recorded that is sufficient to cover the amount for doubtful recovery on investments, portfolio, accounts, and receivables. Provisions are netted from the specific asset accounts. These provisions are calculated as a percentage of all risk assets. Provisions are recorded in the capital accounts. Loans are classified as risks that are normal, potential, deficient, doubtful, or uncollectible. Repeated delays in paying principal and interest in full or in part are an indicator for classifying the loans in question in the above-mentioned risk categories, as follows:

- Normal, if expected losses are no more than 4 percent;
- Potential, if expected losses are in the range of 5-19 percent;
- Deficient, if the range of expected losses is 20-49 percent;
- Doubtful, if the range of expected losses is 40-80 percent; and
- Loss, if the range of expected losses is 80-100 percent.

The loan provision is based on the loan rating, as follows:

- Normal: minimum provision 1;
- Potential: minimum provision 5;
- Deficient: minimum provision 20;
- Doubtful: minimum provision 50; and
- Loss: provision 100.

Stocks and other shares are recorded at purchase cost on the liabilities side on the balance sheet. However, for purposes of monetary statistics they are valued at market prices and recorded on the assets side. Proceeds from these stocks and shares are recorded in deferred charges and expenses.

The valuation principles are specified and summarized in the *Cuaderno de Trabajo* on monetary statistics. Valuation adjustments are presented in valuation changes in the pertinent sectoral balance sheets. Under the dollarization scheme, adjustments are not made when the foreign currency is US dollars; the principle described is applied to transactions in other currencies.

2.4.2 *Recording is done on an accrual basis.*

The Single Catalogue of Accounts determines the use of the accrual criterion for the accumulation of asset and liability interest generated by operations. Accrual basis accounting is used for recording revenues and expenditures, revenues when entitlement is generated although payment may not have been received, and recognition of expenditures when the obligation is incurred although payment may not have been made. The offset is recorded in the subaccounts of receivable cumulative amounts or receivable accounts. Interest on assets or liabilities is continuously accrued during the accounting period.

Credit balances that have not been paid within 30 days after the operation becomes due, without prejudice to collection of the respective late payment interest, will be recorded in past due loans.

Gradual amortization installments or dividends are transferred to the past due loans account 60 days after the operations become due, without prejudice to the collection of the respective late payment interest.

Interest and commissions earned and not collected after 30 days of becoming due are reversed from the corresponding revenue and expenditure accounts to the interest and discounts receivable offset account. In the case of gradual amortization credits, the reversion is applied 60 days after the due date.

Arrears of fees and other similar charges associated with financial instruments that are not included in the balance sheet are considered charges payable and are not classified as

financial instruments. Arrears are included in the balance sheet under accounts receivable/payable.

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

In accordance with the general principle of the MFSM and the 1993 SNA, data are gathered and compiled in gross figures.

Some data categories, such as freely usable international reserves, are presented in the form of a survey with net figures because of the analytical usefulness of data presented in this format, as indicated in the MFSM. The information on freely usable international reserves is not presented in gross figures. Within free international reserves, there is a concept of “nonmonetary gold” that is not consistent with the MFSM criterion.

For compiling the sectoral balance sheets of the BCE and the rest of the financial system, information on financial assets and liabilities is presented as aggregates in major categories.

3. Accuracy and reliability

3.1 Source data

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

The source data available for compiling BCE monetary statistics are the balance sheets prepared daily by the Financial Reporting Section. These balance sheets are generated through a CIF (Financial Information System) processing system.

The source data from other financial corporations are received through electronic mail. Each bank has a directory for depositing the file with the information. These balances are added to an automated system for processing and validating balance sheets (PBA), from which the data are taken for calculating the statistics for the rest of the financial system.

To the extent that it is possible to obtain better information from respondents, the statistics will be more precise. The sectorization matrix to be implemented will be a great statistical support because the current information system was designed for purposes of bank supervision and does not fully cover what is expected for macroeconomic analysis. The sectorization matrix was designed for this reason.

The accounting records on which the balance sheets are based are not sufficiently detailed to classify all financial instruments and economic sectors according to the definitions of the MFSM. In some cases, sectorization problems are evident.

No information is received in addition to the balance sheets. Starting when the new catalogue of accounts takes effect it is expected that institutions will work on developing the sectorization matrix, and it will then be possible to obtain better-quality source data with improved coverage.

Changes that arise from the financial system balance sheets are accommodated in the methodologies used. In addition, the data are revised based on more up-to-date information and adjustments that institutions make to their balance sheets. In some cases, training meetings have been held on changes in the monetary statistics.

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

Although the structure and degree of detail of the single catalogue of accounts allows the BCE to adopt sectorization to a certain extent, the BCE is striving to improve the primary sources of information and adapt them to the MFSM. Currently, the BCE and SB use the same form for reporting data from financial institutions, but this form is more appropriate for purposes of bank supervision.

Data are not received according to the principles for recording monetary statistics. Procedures are carried out to analyze information to improve coverage. Unclassified items, some minimum quantities, go to unclassified net assets.

3.1.3 Source data are timely.

Central Bank statistics are compiled on a daily basis with one day timeliness. Data from other financial system entities are processed daily with two day timeliness.

The banks are strictly monitored and must report to the BCE on a daily basis. As indicated, any financial entity's failure to provide information means that it will not be able to access the operations of the Central Bank of Ecuador. There are timeliness problems in the reporting by banks under liquidation or under the control of the Deposit Insurance Agency.

3.2 Statistical techniques

3.2.1 Data compilation employs sound statistical techniques.

The reporting forms are easy to complete. The data compilation process is automated, reducing the risks of errors in the results. In addition, there is a verification methodology that involves simple mathematical verifications at the accounts aggregation level.

Source data are constantly assessed to detect reporting errors. Banks are informed immediately when errors are detected.

3.3 Assessment and validation of source data

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

The Basic Statistics Section and the Money and Banking Statistics Section do joint analysis work. If there are problems, the financial entity in question is called.

Source data are analyzed based on the variation of stocks. The Basic Statistics Section receives additional tables prepared by the Risk Analysis Section, and these are compared with data from the balance sheets submitted by financial institutions. Financial institutions are immediately notified to make the necessary corrections when inconsistencies are detected.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Main intermediate data are validated against other information where applicable.

Secondary data sources are not used to verify the other depository corporations survey.

Statistical discrepancies in the intermediate data are assessed and investigated. When discrepancies are detected in the intermediate data, the Monetary Statistics Section investigates them and tries to determine the factors contributing to them.

Statistical discrepancies and other indicators of possible problems in statistical products are investigated, except in the case of the central bank balance sheet data as they are final when released. In the case of financial institutions, reporting entities are called upon immediately to analyze the information. If the information is incorrect, the errors are rectified.

3.5 Revision studies

3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.

Preliminary figures are compared to final figures, but there is no routine investigation of the direction and magnitude of revisions. A letter is sent to the SB explaining the discrepancies and revision methods so that the SB can inform the rest of the financial system.

4. Serviceability

4.1 Relevance

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

No formal process has been established for consulting with the departments and ministries or with users in the private sector or in academia. Surveys have been conducted but not continuously. Greater contact is maintained with internal users to establish information requirements.

The unit responsible for compilation has attended training seminars on the *MFSM* organized by the IMF and CEMLA.

4.2 Timeliness and periodicity

4.2.1 Timeliness follows dissemination standards.

Ecuador is a subscriber to the SDDS. The BCE disseminates central bank data weekly, one day after the close of the reference period. Information on the reserves is published within seven days following the end of the reference month. Monthly data of the financial survey are disseminated within a one-month period.

4.2.2 Periodicity follows dissemination standards.

All statistics follow SDDS requirements. The statistics that the Central Bank of Ecuador disseminates in its surveys have a 7-day lag. For internal use of BCE professionals, there is daily access to information, within one day in the case of Central Bank data and two days in the case of data on other depository corporations.

4.3 Consistency

4.3.1 Statistics are consistent within the dataset (e.g., accounting identities are respected).

The recording of the assets and liabilities of the central bank and other depository corporations is somewhat consistent with the principle of sectorization and residence. The new sectorization matrix will improve the quality of the information.

Credits/liabilities with other financial corporations in the central bank survey and the other depository corporations survey are somewhat consistent with liabilities/credits with depository corporations in the other financial corporations balance sheet. It is difficult to identify certain assets and liabilities of other depository corporations because of sectorization problems.

Aggregates and flows cannot be reconciled because the flow of funds is not prepared. For the same reason, credit aggregates cannot be reconciled with debt aggregates.

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

The detailed methodological notes identify and explain the most significant breaks in the time series, their causes, and adjustments made to maintain consistency over time. When there are changes in source data, methodology, or statistical techniques, the historical series are reconstructed as much as is reasonably possible. There are consistent time series for 10 years in sucres both for the monetary accounts of the central bank and for the rest of the financial system. With the dollarization in 2000, there was a structural break in the statistical series. There have been monthly and weekly time series for the financial system accounts in dollars since December 1999.

There is no analytical publication of the monetary statistics. Statistics are analyzed in the BCE's internal reports. Any unexpected fluctuation in economic trends is explained in the analytical text that is part of the publication and in the database to which users have access.

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

The Balance of Payments Section has submitted a proposal on international investment statistics. Once the methodology used is validated and its statistics are thus official, consistency with the monetary statistics will be analyzed. The monetary accounts and the fiscal sector statistics have not been cross-checked. Only rarely have there been tests of the consistency between external assets in the monetary statistics and the balance of payments statistics.

4.4 Revision policy and practice

4.4.1 Revisions follow a regular, well-established, and transparent schedule.

The BCE publishes some monetary and financial statistics as preliminary and presents them as final, following verification. The revision criterion consists of keeping the data as preliminary for three months from the reference period before converting them to final data. Any change in the source data is immediately included in the monetary statistics.

4.4.2 Preliminary data are clearly identified.

The publication *Información Estadística Mensual* [Monthly Statistical Information] includes a general note applicable to all statistics regarding the preliminary or final nature of the data. Users are not informed that the data published initially are preliminary and will be subject to revision. The revised data are released with the same level of detail as the data published earlier that are the subject of revision.

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

The revisions policy is not disclosed to the public, and differences between the preliminary data and the revised data are not explained.

5. Accessibility

5.1 Data accessibility

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

The presentation of the monetary and financial statistics of the BCE facilitates the interpretation of the information. *Información Estadística Mensual* disseminates detailed monthly data for the last two years in the various balance sheets, near money, financial system collections, credit to the private sector. The *Boletín Anuario* [Yearly Bulletin] publishes annual information with details of financial assets and liabilities. Also published are some charts and tables that complement the data and facilitate analysis. Analyses of current trends are not included, and no detailed estimates are published.

5.1.2 Dissemination media and formats are adequate.

Monetary and financial information is disseminated in hardcopy and on the Web page for the needs of users. More recent data and longer time series can be consulted at no cost in the database maintained by the unit responsible for compiling the data. The General Manager sets the prices for publications based on a report submitted by the Director-General of Studies, which includes a cost analysis of the publications.

5.1.3 Statistics are released on a pre-announced schedule.

The annual schedule appears on the BCE Web page and specifies the release dates for statistics. Notice to this effect is published in the “Boletín Mensual.”

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

There are no preferred clients. The results are released through the BCE web page and in hard copy and are available to all users. Statistics are released simultaneously to the public, press, authorities and the government.

5.1.5 Nonpublished (but nonconfidential) sub-aggregates are made available upon request.

Nonpublished and nonconfidential data are provided free of charge at the request of interested parties.

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.

Metadata are compiled according to the requirements. The BCE Web page includes a site where the public can access this information. As Ecuador is a subscriber to the SDDS, all information on metadata is provided on the IMF's DSBB. This includes concepts, classifications, sources of information, and definitions. These metadata are updated periodically. Differences from internationally accepted standards, guidelines, or practices are not adequately documented in the metadata.

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

The BCE Internet site includes a series of data with the principal variables relating to the BCE and the rest of the financial system. *Información Estadística Mensual, Boletín Anuario, and Memoria del Gerente General del BCE* (BCE Annual Report) publish detailed information on the BCE and the rest of the financial system. *Cuaderno de Trabajo* No. 127 on monetary and financial statistics in Ecuador, Methodological Notes and Results, reports in detail to external users on monetary statistics and other financial statistics. The monthly survey includes a summary on the methodological aspects of the statistics.

5.3 Assistance to users

5.3.1 Contact person for each subject field is publicized.

Timely and competent assistance is offered to users of the statistics. Most statistical publications indicate persons who may be contacted by users by mail, telephone, fax, or e-mail. As Ecuador is a subscriber to the SDDS, the public can send their queries directly to the contact persons identified in the metadata on the DSBB. Brochures have not been developed to inform users of other related datasets, nor is there any follow-up of assistance to users through periodic user surveys.

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

There is a catalogue of publications, documents, and other services for users that is updated each year. The update of this catalogue appeared in April 2002. The schedule of publications as well as their cost is published on the Web page, which also indicates the procedure for acquiring publications for which payment is required.

**Table 6. Ecuador: Data Quality Assessment Framework
Monetary Statistics Summary**

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
0. Prerequisites						
0.1 Legal and Institutional Environment		X				Human resources are insufficient to ensure the quality of the statistics.
0.2 Resources			X			
0.3 Quality awareness		X				
1. Integrity						
1.1 Professionalism		X				Changes in methodology and sources are not announced in advance.
1.2 Transparency			X			
1.3 Ethical Standards		X				
2. Methodological Soundness						
2.1 Concepts and definitions		X				Credit union data is not included in the aggregated accounts of other depository corporations. Balances of offshore commercial bank units are not yet compiled. Sectorization does not meet internationally recommended standards. Within international reserves, there is a concept of “nonmonetary gold” that is not consistent with the <i>MFSM</i> criterion.
2.2 Scope			X			
2.3 Classification/sectorization			X			
2.4 Basis for recording			X			
3. Accuracy and reliability						
3.1 Source data			X			Sectorization problems affect the quality of source data.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				There is insufficient cross-checking of data with other sources. Revision studies are carried out, but not regularly.
3.4 Assessment and validation of intermediate and final output data			X			
3.5 Revision studies			X			

**Table 6. Ecuador: Data Quality Assessment Framework
Monetary Statistics Summary**

Dimensions/Elements	Assessments					Comments
	NA	O	LO	LNO	NO	
4. Serviceability						
4.1 Relevance			X			There is no formal process for consulting with external users. Coordination is needed for better compatibility with other statistical frameworks. Revision policy is not disseminated in the publications.
4.2 Timeliness and periodicity		X				
4.3 Consistency			X			
4.4 Revision policy and practice				X		
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Dimensions and Elements of the Special Data Dissemination Standard (SDDS)

Data dimension (coverage, periodicity and timeliness)

- the dissemination of 18 data categories, including component detail covering the four main sectors of the economy, with prescribed periodicity and timeliness.

Access Dimension

- the dissemination of advance release calendars (ARCs) providing at least a one-quarter ahead notice of approximate release dates, and at least a one-week ahead notice of the precise release dates;
- the simultaneous release of data to all users.

Integrity Dimension

- the dissemination of the terms and conditions under which official statistics are produced and disseminated;
- the identification of internal government access to data before release;
- the identification of ministerial commentary on the occasion of statistical releases;
- the provision of information about revision and advance notice of major changes in methodology.

Quality Dimension

- the dissemination of documentation on statistical methodology and sources used in preparing statistics;
- the dissemination of component detail and/or additional data series that make possible crosschecks and checks of reasonableness.

SDDS subscribers are required:

- to post descriptions of their data dissemination practices (metadata) on the IMF's Dissemination Standards Bulletin Board (DSBB). Summary methodologies, which describe data compilation practices in some detail are also disseminated on the DSBB.
- to maintain an Internet website, referred to as the National Summary Data Page, which contains the actual data described in the metadata, and to which the DSBB is electronically linked.

At the March 29, 2000 meeting of the IMF's Executive Board, Directors approved the incorporation of a new SDDS data category on external debt. The transition period for implementing this data category expires in March 2003.

As a result of the Third Review of the SDDS by the Executive Board in March 2000, IMF technical staff began monitoring observance of the standards through the NSDPs maintained on the Internet. Monitoring commenced at the beginning of July 2000 and is limited to coverage, periodicity, and timeliness of the data, and to the dissemination of advance release calendars.

**Data Quality Assessment Framework: Generic Framework
(July 2001 version)**

Quality Dimensions	Elements	Indicators
<p>Prerequisites of Quality¹</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 Quality awareness – <i>Quality is recognized as a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, compiling and disseminating statistics is clearly assigned. 0.1.2 Data sharing and coordination among data producing agencies are adequate. 0.1.3 Respondents’ data are to be kept confidential and used for statistical purposes only. 0.1.4 Statistical reporting is supported by legal mandate and/or measures implemented to encourage voluntary response.</p> <p>0.2.1 Staff, financial and computing resources are commensurate with statistical programs. 0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 Procedures have been put in place for quality awareness. 0.3.2 Procedures have been established for monitoring the quality of data collection, compilation, and dissemination. 0.3.3 Procedures are in place to assess the quality of statistics, to acknowledge and deal with tradeoffs within quality, and to guide planning for existing and emerging needs.</p>
<p>1. Integrity</p> <p><i>The principle of objectivity in the collection, compilation, and dissemination of statistics is firmly adhered to.</i></p>	<p>1.1 Professionalism – <i>Professionalism in statistical policies and practices is a guiding principle.</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 compiled on an impartial basis. 1.1.2 Choices of sources and statistical methods are informed solely by statistical considerations. 1.1.3 The appropriate statistical entity is entitled to comment on errors of interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, compiled, and disseminated are available to the public. 1.2.2 Internal governmental access to statistics prior to their release is made known to the public. 1.2.3 Products of statistical agencies/units are clearly identified as such. 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 made known to staff.</p>

**Data Quality Assessment Framework: Generic Framework
(July 2001 version)**

Quality Dimensions	Elements	Indicators
<p>2. Methodological Soundness</p> <p><i>The methodological basis for the statistics follows internationally accepted standards, guidelines, and good practices.</i></p>	<p>2.1 Concepts and definitions – <i>Concepts and definitions used are in accord with standard statistical frameworks.</i></p> <p>2.2. Scope—<i>The scope is consistent with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.3.1 Classification/sectorization <i>The systems used are consistent 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: See corresponding dataset-specific framework.</p> <p>2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices: See corresponding dataset-specific framework.</p> <p>2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices: See corresponding dataset-specific framework.</p> <p>2.4.1 Market prices are used to value flows and stocks. 2.4.2 Recording is done on an accrual basis. 2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.</p>

**Data Quality Assessment Framework: Generic Framework
(July 2001 version)**

Quality Dimensions	Elements	Indicators
<p>3. Accuracy and reliability</p> <p><i>Source data and statistical techniques are sound, and output data 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 Statistical techniques – <i>Statistical techniques employed are based on sound statistical procedures.</i></p> <p>3.3 Assessment and validation of source data – <i>Source data are periodically assessed and validated.</i></p> <p>3.4 Assessment and validation of intermediate and output data – <i>Intermediate and final output data are periodically 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 collected 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 Data compilation employs sound statistical techniques.</p> <p>3.2.2 Other statistical procedures (e.g., data adjustments and transformations and statistical analysis) are also based on sound statistical techniques.</p> <p>3.3.1 Source data—including censuses, sample surveys and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and non-sampling error; the results of the assessments are monitored and made available to facilitate planning.</p> <p>3.4.1 Main intermediate results are validated against other information where applicable.</p> <p>3.4.2 Statistical discrepancies in the intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other indicators of potential problems with other output data are investigated.</p> <p>3.5.1 Studies and analyses of revisions are carried out routinely and used to improve statistical processes.</p>

**Data Quality Assessment Framework: Generic Framework
(July 2001 version)**

Quality Dimensions	Elements	Indicators
<p>4. Serviceability</p> <p><i>Statistics are relevant, timely, consistent, and follow a predictable revisions policy.</i></p>	<p>4.1 Relevance of the statistics – <i>Statistics cover relevant information on the subject field.</i></p> <p>4.2 Timeliness and periodicity – <i>The timeliness and periodicity of the statistics follow internationally accepted dissemination standards.</i></p> <p>4.3 Consistency – <i>Statistics are internally consistent within the dataset and over time, and are compatible with other datasets.</i></p> <p>4.4 Revisions policy and procedures – <i>Data revisions follow a regular and publicized procedure.</i></p>	<p>4.1.1 The relevance and practical utility of the statistics in meeting users’ needs are regularly assessed.</p> <p>4.2.1 Timeliness follows dissemination standards. 4.2.2 Periodicity follows dissemination standards.</p> <p>4.3.1 Statistics are internally consistent within the dataset (e.g., accounting identities are observed). 4.3.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.3.3 Statistics are consistent or reconcilable with those obtained from other data sources and/or statistical frameworks.</p> <p>4.4.1 Revisions follow a regular, well-established and transparent schedule. 4.4.2 Preliminary data are clearly identified. 4.4.3 Studies and analyses of revisions are made public.</p>

**Data Quality Assessment Framework: Generic Framework
(July 2001 version)**

Quality Dimensions	Elements	Indicators
<p>5. Accessibility</p> <p><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, dissemination formats 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).</p> <p>5.1.2 Dissemination media and formats are adequate.</p> <p>5.1.3 Statistics are released on a pre-announced schedule.</p> <p>5.1.4 Statistics are made available to all users at the same time.</p> <p>5.1.5 Non-published (but non-confidential) subaggregates 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 noted.</p> <p>5.2.2 The degree of detail is adapted to the needs of users, to ensure their satisfaction.</p> <p>5.3.1 The contact person for each subject field is publicized.</p> <p>5.3.2 Catalogs of publications, documents and other services, including information on their cost, are easily obtainable.</p>

¹ The elements and indicators included here bring together the “pointers to quality” that are applicable across the five dimensions of data quality.

TABLE –ECUADOR: LEGAL AND REGULATORY FRAMEWORK FOR MACROECONOMIC STATISTICS COMPILATION

FISCAL ACCOUNTS	
I. Assignment of Responsibilities	<p>Organic Statutes of the Central Bank of Ecuador (May 16, 2001) (Title IV, Chapter 2, Sections 2.1.1.c and 2.1.3)</p> <p>Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997)</p> <p>Political Constitution of the Republic of Ecuador (1998) (Article 259)</p> <p>Public Sector Budgets Law (November 30, 1992) (Article 67)</p> <p>Regulations of the Public Sector Budgets Law (February 26, 1993) (Article 114)</p> <p>Organic Law on Financial Administration and Control (may 16, 1977) (Article 24, numerals 17 and 21)</p> <p>Agreement 005 of the Comptroller General’s Office (February 3, 1995) (Articles 2, 6 and 9)</p> <p>Organic Regulations of the Ministry of Economy and Finance (April 16, 2001) Article 15, numerals 5.1.1.c, 5.2.1.b, 5.2.1.2.j, 5.2.2.2.e, and 5.2.3.1.f</p> <p>Law establishing the Internal Revenue Service (November 13, 1997) (Articles 2.7, 4.10, and 7.14)</p>
II. Data Reporting Requirement for Respondents	<p>Agreement 005 of the Comptroller General’s Office (February 3, 1995) (Article 7)</p> <p>Public Sector Budgets Law (November 30, 1992) (Article 64)</p> <p>Regulations of the Public Sector Budgets Law (February 26, 1993) (Article 111)</p> <p>Law establishing the Internal Revenue Service (November 13, 1997) (Article 2. 9)</p> <p>Local Development Law (May 21, 1990) (Articles 10.a.3, and 12)</p> <p>Organic Law on Financial Administration and Control (May 16, 1977) (Article 93)</p> <p>Agreement 005 of the Comptroller General’s Office (February 3, 1995) (Articles 5, 8 and 10-12)</p>
III. Qualified Personnel and Good Production and Dissemination Practices	<p>Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997)</p> <p>Organic Statutes of the Central Bank of Ecuador (May 16, 2001) Title II, Articles 11 and 13)</p> <p>Civil Service and Administration Career Law (April 26, 1978) (Articles 3 and 95-101)</p> <p>Organic Law on Financial Administration and Control (May 16, 1977) (Articles 27and 28)</p> <p>Agreement 017 of the Comptroller General’s Office (April 28, 1994) (Article --)</p> <p>Organic Regulations of the Ministry of Economy and Finance (April 16, 2001), (Articles 12and 13)</p>

TABLE –ECUADOR: LEGAL AND REGULATORY FRAMEWORK FOR MACROECONOMIC STATISTICS COMPILATION

FISCAL ACCOUNTS	
IV. Confidentiality, Ethical Conduct, and Penalties	<p>Regulations to the Civil Service and Administration Career Law (April 10, 1985) (Chapter VII, Articles 57-62)</p> <p>Organic Law on Financial Administration and Control (May 16, 1977) (Article 30)</p> <p>Law on the Monetary System and State Bank (May 7, 1992) (Article 92.m)</p> <p>Code of Ethics (BCE Management Resolution, October 12, 2000)</p> <p>Statistics Law (May 7, 1976) (Articles 21 and 25)</p>
V. Interinstitutional Coordination (broad sense)	<p>Political Constitution of the Republic of Ecuador (1998) (Article 262)</p> <p>Law on the Monetary System and Government Regime (November 23, 1992) (Article 2.c)</p> <p>Public Sector Budgets Law (November 30, 1992) (Article 27)</p> <p>Law establishing the Internal Revenue Service (November 13, 1997) (Article 3)</p>
VI. Institutional Autonomy and Independence	<p>Political Constitution of the Republic of Ecuador (1998) (Article 261)</p> <p>Law establishing the Internal Revenue Service (November 13, 1997) (Article 5)</p>
VII. Financial Resources	<p>The BCE Board approves its own budget. (Title IV, Chapter 1.1.h of the Organic Statutes of the BCE, May 16, 2001)</p> <p>The National Congress approves the budget of the MEF. (Article 258 of the Political Constitution of the Republic of Ecuador, 1998)</p>

Source: Laws and Regulations of the Republic of Ecuador.

**TABLE –ECUADOR: LEGAL AND REGULATORY FRAMEWORK FOR MACROECONOMIC STATISTICS
COMPILATION**

MONEY AND BANKING	
I. Assignment of Responsibilities	<p>Law on the Monetary System and State Banks (May 7, 1992) (Article 92.c.1.n)</p> <p>Law for the Economic Transformation of Ecuador (May 13, 2000) (Article 1.d)</p> <p>Organic Statutes of the Central Bank of Ecuador (May 16, 2001) (Title IV, Chapter 2, Sections 2.1.1.c and 2.1.3)</p> <p>Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997)</p> <p>General Law on Financial System Institutions (January 23, 2001) (Article 180.h and i)</p>
II. Data Reporting Requirement for Respondents	<p>General Law on Financial System Institutions (January 23, 2001) (Articles 78, 79, 81, 82, 83 and 91)</p> <p>Statistics Law (May 7, 1976) (Articles 20 and 22-24)</p> <p>Coding of BCE Board Regulations, Book I, (Monetary-Credit Policy), Title One (Open Market Operations, Chapter IV, Reporting Requirement)</p>
III. Qualified Personnel and Good Data Production and Dissemination Practices	<p>Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997)</p> <p>Organic Statutes of the Central Bank of Ecuador (May 16, 2001) (Title II, Articles 11 and 13)</p> <p>Civil Service and Administration Career Law (April 26, 1978) (Articles 3 and 95-101)</p>
IV. Confidentiality, Ethical Conduct, and Penalties	<p>Regulations to the Civil Service and Administration Career Law (April 10, 1985) (Chapter VII, Articles 57-62)</p> <p>General Law on Financial System Institutions (January 23, 2001)</p> <p>Law on the Monetary System and State Banks (May 7, 1992) (Article 92.m)</p> <p>Code of Ethics (BCE Management Resolution, October 12, 2000)</p> <p>Codified Regulations on Integrated Human Resource Management of the BCE (June 11, 1996) (Articles 78-83)</p> <p>Statistics Law (May 7, 1976) (Articles 21 and 25)</p>
V. Interinstitutional Coordination (broad sense)	<p>General Law on Financial System Institutions (January 23, 2001) (Article 174)</p> <p>Interinstitutional Cooperation Agreement BCE-Superintendency of Banks (April 17, 1997)</p>
VI. Institutional Autonomy and Independence	<p>Political Constitution of the Republic of Ecuador (1998) (Article 261)</p>
VII. Financial Resources	<p>The BCE Board approves its own budget. (Title IV, Chapter 1.1.h of the Organic Statutes of the BCE, May 16, 2001)</p>

Source: Laws and Regulations of the Republic of Ecuador.

**TABLE –ECUADOR: LEGAL AND REGULATORY FRAMEWORK FOR MACROECONOMIC STATISTICS
COMPILATION**

PRICES	
I. Assignment of Responsibilities	Organic Law on Consumer Protection (July 10, 2000) (Article 52)
II. Data Reporting Requirement for Respondents	Statistics Law (May 7, 1976) (Articles 20 and 22-24)
III. Qualified Personnel and Good Practices in Data Production and Dissemination	Civil Service and Administration Career Law (April 26, 1978) (Articles 3 and 95-101) Operating Rules governing Activities involved in the Process of Investigating the Urban Consumer Price Index (Resolution No. 011 of the Director General of INEC, issued in 1993)
IV. Confidentiality, Ethical Conduct, and Penalties	Regulations to the Civil Service and Administration Career Law (April 10, 1985) (Chapter VII, Articles 57-62) Statistics Law (May 7, 1976) (Articles 21 and 25) Internal Regulations on Human Resource Management in INEC, November 27, 1996 Internal Regulations governing the Proper and Confidential use of Statistical Data, INEC, January 15, 2002 Law on the Monetary System and State Banks (May 7, 1992) (Article 92.m) Code of Ethics (BCE Management Resolution, October 12, 2000) Codified Regulations on Integrated Human Resource Management of the BCE (June 11, 1996) (Articles 78-83)
V. Interinstitutional Coordination (broad sense)	BCE-INEC Reciprocity Agreement (August 9, 1996) ¹ Interinstitutional Service Provision Agreement BCE-INEC ² (December 14, 1998)
VI. Institutional Autonomy and Independence	
VII. Financial Resources	MEF approved INEC's budget, which is subsequently ratified by the National Congress. Article 16 of the Public Sector Budgets Law (November 30, 1992)

Source: Laws and Regulations of the Republic of Ecuador.

¹ The last in the series of agreements signed after 1980.

² The last in the series of agreements signed after 1993.

**TABLE –ECUADOR: LEGAL AND REGULATORY FRAMEWORK FOR MACROECONOMIC STATISTICS
COMPILATION**

NATIONAL ACCOUNTS	
I. Assignment of Responsibilities	Organic Statutes of the Central Bank of Ecuador (May 16, 2001). (Title IV, Chapter 2, Sections 2.1.1.c and 2.1.3) Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997) Organic Regulations of the Ministry of Economy and Finance (April 16, 2001) (Article 15, numerals 5.1.1.d, 5.1.1.4.a and b)
II. Data Reporting Requirement for Respondents	Statistics Law (May 7, 1976) (Articles 20 and 22-24)
III. Qualified Personnel and Good Practices in Data Production and Dissemination	Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997) Organic Statutes of the Central Bank of Ecuador (May 16, 2001) (Title II, Articles 11 and 13) Civil Service and Administration Career Law (April 26, 1978) (Articles 3 and 95-101)
IV. Confidentiality, Ethical Conduct, and Penalties	Regulations to the Civil Service and Administration Career Law (April 10, 1985) (Chapter VII, Articles 57-62) Law on the Monetary System and State Banks (May 7, 1992) (Article 92.m) Code of Ethics (BCE Management Resolution, October 12, 2000) (Articles 78-83) Statistics Law (May 7, 1976) (Articles 21 and 25)
V. Interinstitutional Coordination (broad sense)	
VI. Institutional Autonomy and Independence	Political Constitution of the Republic of Ecuador (1998) (Article 261)
VII. Financial Resources	The BCE Board approves its own budget. (Title IV, Chapter 1.1.h of the Organic Statutes of the BCE, May 16, 2001)

Source: Various laws and regulations of the Republic of Ecuador.

**TABLE –ECUADOR: LEGAL AND REGULATORY FRAMEWORK FOR MACROECONOMIC STATISTICS
COMPILATION**

EXTERNAL ACCOUNTS	
I. Assignment of Responsibilities	Organic Statutes of the Central Bank of Ecuador (May 16, 2001) (Title IV, Chapter 2, Sections 2.1.1.c and 2.1.3) Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997)
II. Data Reporting Requirement for Respondents	Statistics Law (May 7, 1976) (Articles 20 and 22-24)
III. Qualified Personnel and Good Practices in Data Production and Dissemination	Standards for Production and Dissemination of Statistics (BCE Resolution, May 13, 1997) Organic Statutes of the Central Bank of Ecuador (May 16, 2001) (Title II, Articles 11 and 13) Civil Service and Administration Career Law (April 26, 1978) (Articles 3 and 95-101)
IV. Confidentiality, Ethical Conduct, and Penalties	Regulations on the Civil Service and Administration Career Law (April 10, 1985) (Chapter VII, Articles 57-62) Law on the Monetary System and State Banks (May 7, 1992) (Article 92.m) Code of Ethics (BCE Management Resolution, October 12, 2000) Codified Regulations on Integrated Human Resource Management of the BCE (June 11, 1996) (Articles 78-83) Statistics Law (May 7, 1976) (Articles 21 and 25)
V. Interinstitutional Coordination (broad sense)	General Law on Financial System Institutions (January 23, 2001) (Article 174) BCE-Superintendency of Banks Agreement (--) BCE-Superintendency of Companies Agreement (--)
VI. Institutional Autonomy and Independence	Political Constitution of the Republic of Ecuador (1998) (Article 261)
VII. Financial Resources	The BCE Board approves its own budget. (Title IV, Chapter 1.1.h of the Organic Statutes of the BCE, May 16, 2001)

Source: Various laws and regulations of the Republic of Ecuador.