

**IMMEDIATE
ATTENTION**

SM/10/39
Supplement 2

February 18, 2010

To: Members of the Executive Board

From: The Secretary

Subject: **Costa Rica—Report on the Observance of Standards and Codes—
Detailed Assessments Using the Data Quality Assessment Framework**

The attached supplement to the data module of the report on the observance of standards and codes for Costa Rica (SM/10/39, 2/18/10) relates to detailed assessments using the data quality assessment framework and is circulated for the **information** of the Executive Directors.

It is expected that this report will be posted on the Fund's external website after Thursday, February 25, 2010.

Questions may be referred to Ms. San Jose (ext. 36327) and Mr. Cartas (ext. 34055) in STA.

This document will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

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INTERNATIONAL MONETARY FUND

COSTA RICA

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

Detailed Assessments Using the Data Quality Assessment Framework (DQAF)

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February 17, 2010

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

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ACRONYMS

<i>1993 SNA</i>	<i>1993 System of National Accounts</i>
<i>2008 SNA</i>	<i>2008 System of National Accounts</i>
BCCR	Central Bank of Costa Rica (Banco Central de Costa Rica)
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
BOP	Balance of Payments
<i>BOPSY</i>	<i>Balance of Payments Statistics Yearbook</i>
CPC	Central Product Classification
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPI	Consumer Price Index
DC	Depository Corporations
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
ENIG	National Income and Expenditure Survey
GDP	Gross Domestic Product
GFS	Government Finance Statistics
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics</i> , 1986
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
IMF	International Monetary Fund
INEC	National Institute of Statistics and Censuses (Instituto Nacional de Estadísticas y Censos)
ISIC	International Standard Industrial Classification of all Economic Activities
MFS	Monetary and Financial Statistics
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MOF	Ministry of Finance (Ministerio de Hacienda)
ODCs	Other Depository Corporations
PPI	Producer Price Index
ROSC	Report on the Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
SEN	National Statistical System (Sistema de Estadística Nacional)
SIGADE	External Debt Management System
SINPE	Integrated Electronic Payments System
STA	IMF Statistics Department
SUGEF	General Superintendency of Financial Entities (Superintendencia General de Entidades Financieras)

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

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

I. NATIONAL ACCOUNTS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The national accounts of Costa Rica are compiled by the Macroeconomic Statistics Department of the Economic Division in the Central Bank of Costa Rica (BCCR). The Law 7558 (*Organic Law of the Central Bank of Costa Rica*), dated November 3, 1995, and subsequent amendments, do not specifically assign the compilation of the national accounts to the BCCR. Nevertheless, it mandates the BCCR to publish monthly and annual reports containing macroeconomic data for which national accounts aggregates are needed. In effect, Article 14(d) states that the Central Bank of Costa Rica (BCCR) “shall publish, on a monthly basis, a statistical summary of the economic situation of the country, including, at a minimum, information on production, prices, monetary aggregates, credit, exports, imports, and gross and net international reserves. The Bank shall establish and publish the methodology that it will use to compile this statistical summary, as well as any changes to such methodology.” Article 16(b) of the same law establishes that the BCCR shall publish, during the first three months of the year, “a summary of the main economic, monetary, financial, and banking events of the previous year.” Filling a legal void regarding clear assignment of compilation responsibilities, the BCCR compiles and disseminates the national accounts.

The Law 7839, dated October 15, 1998, created the National Statistical System (SEN) and established the National Institute of Statistics and Censuses (INEC). Its Article 15 lists the statistics that INEC must generate. Article 15(d) explicitly mentions that INEC should produce “the basic statistics required to compile the national accounts and the other macroeconomic accounts on charge of the Central Bank of Costa Rica.” Transitory Disposition III of this law determined the timing and conditions for transferring the compilation and dissemination of the national accounts from the BCCR to INEC. Transitory Disposition V authorized the BCCR to restructure its Social Accounts Department, as a result of the planned transfer of functions. Nevertheless, the Transitory Dispositions III and V were derogated by Law 8284 of May 28, 2002. As a result of the described process, although no legal disposition explicitly assigns to the BCCR the compilation and dissemination of the

national accounts, Article 15(d) of Law 7839 recognizes that the institution responsible for compiling the national accounts is the BCCR. The BCCR's working arrangements are consistent with this responsibility.

Recommendation: The BCCR's responsibility for compiling and disseminating the national accounts should be firmly established by law or other formal provisions.

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

An important part of the basic statistics required to compile the national accounts is produced by INEC, with some of its surveys financed by the BCCR through special agreements. An Inter-institutional Cooperation Agreement between the BCCR and INEC was adopted in May 2008, with the objective of establishing an overall framework to support the BCCR's Program for Macroeconomic Statistics. Various contracts executed or to be executed between the two institutions cover the conduct of approximately 30 specific statistical projects listed in Annex I of the Agreement. These projects include foreign trade statistics; quarterly transfers between resident and nonresident households; household surveys to produce quarterly data on employment, unemployment, and income; annual surveys to estimate trade and transport margins; and import price index. A tangible result of the Agreement is an updated directory of institutional units and establishments generated by INEC. BCCR is given access to the corresponding database. Under the Agreement, a program to maintain, update, and improve the directory is planned.

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

The Law 7558, Article 14(f) protects the confidentiality of the data reported to the BCCR by individual and juridical entities. Also, the Law 7839, Article 4 mandates all entities belonging to the SEN to compile and manage statistical data in accordance with the confidentiality principle. In addition, the *Guidelines on Impartiality, Objectivity and Integrity of the Staff of the Central Bank of Costa Rica* indicate in Article 5 that, "... besides the legal dispositions that compel public servants to preserve the confidentiality of the issues under their knowledge ... staff must be discreet with regard to all facts and information they become aware when performing their functions ...". This requirement extends up to one year after the employee has terminated his/her relation with the BCCR, and in some special cases until the facts lose their relevance.

In all censuses and surveys, respondents are informed of the legal obligation to provide the requested information, the confidential nature of the information being requested, and that information will be only used for the purpose of producing statistics.

The BCCR has adopted adequate measures to prevent the disclosure of individual data, including, among others, the following: access to individual data is restricted to staff who require the information in the performance of their statistical duties; special aggregation rules are used to prevent residual disclosure when aggregations of survey or other confidential data are disseminated; confidentiality of data is appropriately guarded during storage and during

the process of destruction of written forms; access to the building is controlled by security personnel; and penalties against staff who disclose confidential data are established in the BCCR's staff rules.

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

The legal framework requires the public sector to provide to the BCCR the statistical information it requires. The BCCR has full access to the data collected by the General Superintendency of Financial Entities (SUGEF). However, the private nonfinancial entities and socially recognized units (households and non-profit institutions serving households) have no legal obligation to provide information to the BCCR. Also, the law establishing the SEN does not mandate that individuals or legal entities in the private sector provide information for statistical purposes to INEC or other statistical agencies. A legal initiative that would make reporting mandatory for private nonfinancial units for statistical purposes has been pursued since 2002, but without success until now.

The Central Bank seeks to secure cooperation by providing information to the respondents on the objectives of the survey and the use of the data being requested in a note to which the questionnaire is attached. A contact person is included in the note, providing the telephone number and the e-mail address, who will provide support and further information, if needed. The BCCR staff visit large enterprises to provide assistance in completing the questionnaires. Careful consideration is given to response burden relying as much as possible on administrative sources, such as financial statements of enterprises.

Recommendation: Revise the legal framework to give the BCCR and the INEC authority to get primary data from nonfinancial private sector units in a timely fashion.

0.2 Resources

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

A functional restructuring of the BCCR was initiated in October 2008. As a result, the Economics Division has a new departmental structure with new defined activities. The Division now has the following units with a total of 107 positions.

Units	Assigned Positions
Direction of the Division	7
Departments	
Analysis and Consultancy	13
Economic Research	14
Financial Information Management	26
Macroeconomic Statistics	47

The Macroeconomic Statistics Department is in charge of compiling the national accounts, balance of payments statistics, and monetary and financial statistics. Out of the Macroeconomic Statistics Department's 47 positions, 26 are assigned to the compilation of the national accounts. It should be noted that, as a product of the new structure and distribution of responsibilities, most of the BCCR's activities related to the conduct of surveys and construction of indices, have been assigned to the Financial Information Department, thus releasing additional resources for the compilation and overall quality improvement of the national accounts, including the updating of the reference year.

The employees engaged in the national accounts compilation have a good level of professional training. Employees have benefited from on-the-job training by working with international experts who acted as national accounts consultants, as well as, participating in national accounts-related courses, seminars, and other specialized activities abroad, offered by the IMF, the National Statistics Institute of Spain, the Center for Monetary Studies of Latin America (CEMLA), and the National Bureau of Economic Analysis (BEA) of the United States, among other institutions.

Regarding computing resources, the Macroeconomic Statistics Department is well equipped. Every employee has a computer with enough speed, RAM, and hard-drive capacity. Computers are linked by a local network within the BCCR, and have access to Internet, Intranet, e-mail, and to periodically updated software for data compilation and analysis. As regards physical resources, building facilities are quite good and adequate to perform the required tasks.

Funding is reasonably secured for the identified needs of the national accounts, and the budgeting practices (see 0.2.2 below) provide clear information to the BCCR management when reviewing priorities for improvements, cutbacks, or increases in certain elements of the work program of the Macroeconomic Statistics Department.

0.2.2 Measures to ensure efficient use of resources are implemented

A program, called the Annual Service Plan, is in place to ensure that resources are efficiently used. The Plan establishes specific objectives, products to be generated, and associated tasks at the Section and Department levels. The degree of accomplishment of the objectives, products, and corresponding tasks is evaluated periodically. In addition, a monthly process—Cost ABC—has been recently introduced. It allows for a more efficient administration of the information related to the costs of services and products by taking into account hours of work and productivity of the different units of the Division. The BCCR tries to introduce the most advanced information technology to save resources in the compilation and dissemination of its statistical products. The BCCR is also implementing an ambitious automation project that will increase staff productivity and efficiency. The employees' job performance is evaluated every six months.

0.3 *Relevance*

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

In December 2003, the Division of Institutional Development (DDI) of the BCCR conducted a satisfaction survey of internal and external users to evaluate the quality of the services provided by the BCCR, including its statistical products. Several dimensions were evaluated, such as response time, service to clients, professionalism, organization, etc. At the time of this ROSC mission, a similar survey was underway at the BCCR, this time conducted by the Direction of Planning and Management Control (DPCG).

To better address users needs and improve the utility of the national accounts, the BCCR is implementing a project to update the reference year. For this purpose, the BCCR is entering into various inter-institutional arrangements to improve the national accounts database. The BCCR takes into account users needs when preparing new surveys' questionnaires. It has created inter-institutional working groups, which include main data users. The BCCR also participates in these types of working groups in relation to surveys to be conducted by other institutions. Additionally, the BCCR receives directly user requirements through the e-mail address provided on its website. Follow-up actions by the relevant departments of the BCCR are monitored.

Recommendation

In updating the national accounts reference year, also implement the new features of the 2008 SNA that are particularly relevant for Costa Rica.

0.4 *Other quality management*

0.4.1 *Processes are in place to focus on quality*

The BCCR has implemented a restructuring of the Economics Division. The main objective of the restructuring was to adopt more transparency and improve the quality of its work practices and outputs. The Division's new functional structure has resulted in a reduction of the burden on national accounts compilers in collecting and processing basic statistics, thus allowing them to concentrate on improving the overall quality of the macroeconomic aggregates that they compile.

To better comply with international quality standards, the BCCR subscribed to the Data Dissemination Standard (SDDS) in 2002. In adopting the 1993 SNA, compilers benefited from expert guidance from international consultants on the analysis of source data, application of compilation methods, and assessment and validation of intermediate data and statistical outputs.

A technical committee within the BCCR evaluates the accuracy, coverage, and timeliness of the national accounts and other macroeconomic statistics published on the BCCR's website.

BCCR's management is aware of the different dimensions of data quality and the possible trade-off between timeliness and accuracy.

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

Measures are in place for a systematic monitoring and review of the quality of survey data collection and processing. The project for updating the reference year and implementing the 1993 SNA gave the compilers the access to expert guidance of international consultants on the analysis of source data, application of compilation methods, and the assessment and validation of intermediate data and statistical outputs, which allowed a deep analysis of the reasons for the weaknesses of the previous series and the implementation of measures to increase the quality of the new ones. Also, the compilation and revision cycle of the national accounts constitutes in itself a mechanism to monitor the quality of the national accounts.

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

The BCCR's new project on changing the reference year of the national accounts takes into consideration the need to better address new and emerging data requirements of users. To implement this project, the database of the national accounts needs to be significantly improved in coverage and quality, for which purpose the BCCR is entering in various inter-institutional arrangements, particularly with the INEC. As a result of an inter-institutional agreement with the INEC, the BCCR now has a directory of institutional units and establishments, which will permit a better application of scientific sampling techniques in surveys. This is one of the approximately 30 different statistical products to be generated through various contracts with the INEC.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis

Article 1 of the *Organic Law of the Central Bank* states that the BCCR is an autonomous institution. It is independent from other state authorities in implementing its responsibilities, including the compilation and dissemination of monetary statistics. The independence and impartiality of staff of the BCCR when performing their duties are guaranteed by the Law 6227 (*General Law of the Public Administration*), which indicates, among others, that public servants must not follow orders when they were clearly extraneous to their competence, or obviously arbitrary (Article 108); public interest should prevail over the interest of the public administration (Article 113). These provisions are reinforced by the BCCR's *Autonomous Guideline of Services*, in particular by its Article 116, where staff of the BCCR is required to perform their duties in a diligent way and employing all the required efforts, concentration, care, and dedication. The internal audit system of the BCCR safeguards the technical independence of the tasks carried out by the institution. National accounts compilers apply strict technical criteria, following the methodology of the

1993 SNA. There have been no cases of interference from other governmental agencies or the higher authorities of the BCCR in the compilation of the national accounts.

Management of the BCCR promotes a culture of professionalism and supports staff participation in training courses, their pursuit of post-graduate studies, and their attendance in international meetings. The remuneration policy promotes research, and salary increases are given to staff that has published books or articles in technical journals, or has lectured in specialized courses.

Recruitment and promotions at the BCCR are based on skills and expertise in the relevant areas. Hiring is done following a competitive process, with openings posted on its internal and external websites, indicating the remuneration and the stage of the recruitment process.

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

Decisions regarding data sources and statistical methods and techniques considered most adequate for compiling the national accounts are taken by the Macroeconomic Department, based only on data quality, timeliness, costs, and the report burden on informants. Results are not subject to any external or internal influence. Also, decisions on data dissemination are based only on technical considerations.

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

The Macroeconomic Statistics Department is authorized to comment on erroneous interpretations or misuse of the disseminated national accounts statistics. When statistics are misinterpreted or misused, the BCCR provides relevant clarifications, generally prepared by the Macroeconomic Statistics Department.

1.2 Transparency

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

The *Organic Law* of the BCCR and other relevant documents, containing the terms and conditions under which the BCCR's statistics are compiled and disseminated can be accessed on the BCCR's website and are also available in hard copy from its Information Center. Specific information on confidentiality and use of individual data provided by survey respondents is included in the presentation note to which the corresponding survey questionnaire is attached.

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

No outside governmental institutions have access to the data before they are disseminated to the public.

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

The BCCR publications are clearly identified by showing the BCCR's name and logo. Data released to the public are clearly identified as BCCR's products. The BCCR indicates in its publications the source of the information, whether in the case of its own products or when it reproduces data from other statistical agencies. The source of information is usually mentioned in a footnote.

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

No advance notice is given to the public on major changes in the conceptual framework, source data, and statistical techniques for the national accounts. They are generally disclosed to the public the first time the data are disseminated.

1.3 Ethical standards

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

Guidelines for staff behavior are provided in the *Autonomous Guideline of Services and Guideline on Impartiality, Objectivity, and Probity of the Staff of the BCCR*, approved by the BCCR's Board of Directors on September 19, 2007. The staff are informed of the obligations, prohibitions, and sanctions covered by this guideline, other internal instructions, as well as by other regulations which applies to all civil servants.

2. Methodological soundness

2.1 Concepts and definitions

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

The concepts and definitions used to compile the national accounts are broadly consistent with the guidelines of the 1993 *SNA*, with some deviations that are due more to the lack of source data than to conceptual considerations.

2.2 Scope

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

Costa Rica's national accounts include the following accounts and aggregates:

- Annual GDP estimates compiled by production, expenditure approaches, at current and constant 1991 prices and income approach at current prices. To each yearly estimates, a projection for the next year is also prepared.

- Annual supply and use tables at current and constant prices.
- Sequence of accounts up to the capital account for the total economy.
- Main balancing items for the total economy, at annual current prices, showing how they are derived. The items include: GDP, gross national income, gross disposable income, gross saving, and net lending.
- Institutional sector accounts, although not disseminated, have been compiled for financial institutions, public nonfinancial institutions and general government. They cover all the sets of accounts for every year during 2000–2007. Institutional sector accounts have not been compiled for the following units: private nonfinancial corporations, households, and nonprofit institutions serving households (NPISH).

The national accounts cover the economic activities of all resident institutional units, based on the *1993 SNA* recommendations. Consistent with the concept of residence, the scope includes the following: activities of companies located in free zones, Costa Rican embassies, and workers residing abroad for a period of less than one year.

The production boundary is only partially consistent with the *1993 SNA*. Included in output estimates are as follows:

- Own-account production of goods intended for final household consumption.
- Own account production of goods for fixed capital formation.

However, not included or not separately identified are the following:

- Own-account produced research and development.
- Production of entertainment, literary or artistic originals.
- Illegal output sold to buyers disposed to purchase them.

As for the asset boundary, the following items are included:

- Due to the absence of a military in Costa Rica, all defense expenditures on new construction and equipment for domestic security are considered assets that may have civilian use.
- Work in progress of main agriculture products, i.e., coffee and sugar cane are included. This calculation is also done for construction activity.
- Computer applications, only when purchased from third parties.
- Valuables are included when detected, e.g., valuable paintings and similar assets belonging to the BCCR.

Not included in the asset boundary are historical monuments and intangible assets, such as: artistic original. Patented entities, leases and other transferable contracts are included if these are treated as assets by the data source.

2.3 Classification/sectorization

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

The classification of institutional units, transactions, and other flows is generally consistent with the *1993 SNA*.

The classification of economic activities is based on an outdated version of the United Nations International Standard Industrial Classification of All Economic Activities (ISIC Rev.2), and not on a more recent version as recommended by *1993 SNA*. Producing units are classified at the four-digit level for the annual accounts and at the one-digit level for quarterly accounts. A breakdown of household consumption is done by ad hoc national classification and not by categories in the Classification of Individual Consumption by Purpose (COICOP), as recommended by the *1993 SNA*. COFOG is not used to classify government expenditure by functions.

Recommendation: Update the ISIC classification and harmonize its use by all relevant institutions. Classify government final consumption expenditure by COFOG. Classify households final consumption expenditure by COICOP.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

In general, the *1993 SNA* valuation principles for transactions are followed, except for the high technology industry, where market prices are not applied in some foreign trade transactions. Market output is valued at basic prices or at costs. Output for own use is valued at equivalent market prices or at costs, depending on the available information. Other non-market output is valued at cost. Intermediate consumption, household final consumption expenditure, and gross fixed capital formation are valued at purchase prices, and total exports and imports at *f.o.b.* prices.

Recommendation: Estimate market prices for high technology industry foreign trade transactions that are not recorded on this basis

2.4.2 Recording is done on an accrual basis

Some government and rest of the world transactions are recorded on cash basis. However, in the case of government transactions, cash basis recording is only used in the preliminary estimates. An approximation of the accrual basis is applied to the definitive estimates by adjusting the expenditure for commitments based on the execution of the budget. Interest paid by the government on its external debt is recorded on a cash basis.

Recommendation: Adjust interest paid by the government on its external debt, to record it on an accrual basis.

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

The procedures for calculating gross and net figures are broadly in accordance with the 1993 SNA. Thus, for example, transactions among establishments belonging to the same enterprise are recorded on a gross basis.

3. Accuracy and reliability

3.1 Source data

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

The BCCR is making efforts to significantly increase the coverage and quality of the database for the compilation of macroeconomic accounts and indicators, particularly to provide the data required for the updating of the reference year for the national accounts. As part of these efforts, and as a result of an agreement between the BCCR and INEC, a new directory of institutional units and establishments has been compiled by the INEC. It will allow the application of scientific sampling techniques for new establishments and institutional units surveys.

The results from the 2004/2005 national income and expenditure survey (ENIG) will be used in the updating of the reference year of the national accounts. The ENIG used scientific sampling techniques. The survey covered households from all socio-economic groups in both the urban and rural zones of the country. The sample, containing 5220 households, was selected using a sampling frame based on the 2000 Population Census.

A Multi-Purpose Household Survey is conducted annually in the month of July or August since 1985. It provides data on the labor market for the construction of indicators on employment, unemployment, and wages/earnings, among others. Twelve thousand households are visited and data on approximately 40,000 persons collected. The survey has a national coverage and provides estimates for the country, as well as for the urban and rural zones, and the six regional divisions. It is based on a probabilistic sample design.

The labor market indicators on employment, unemployment, and wages/ earnings are part of the SDDS requirements. However, Costa Rica is adopting a flexibility option on the periodicity of the labor market data, since the survey does not generate the needed quarterly data. As part of an agreement between the BCCR and INEC, the survey will be expanded to generate quarterly estimates.

In relation to price statistics, the CPI has been recently rebased by INEC, following the ENIG survey mentioned above. Good statistical techniques were generally applied. The index

doesn't include imputed rentals for owner occupied dwellings, in circumstances that 85 percent of all dwellings are occupied by their owners.

A monthly PPI is compiled by the BCCR, covering the manufacturing activities. It applies the ISIC Rev. 3 classification. The index covers sales of output to the domestic market only, excluding sales of exported output. The BCCR compiles a separate PPI for services, with a base year of 1980. However, the weights, the establishment sample, and product sample for this index are outdated. The BCCR is presently in the process of revising the PPI and the index for services. The later will be incorporated in an expanded PPI.

Price or unit value indices for exports and imports are not compiled. However, compilers apply prices from different sources for exported and imported goods.

The following section lists the main sources used in the compilation of the national accounts. An evaluation of the quality of the most important sources used in annual estimates is included.

The following are the main data sources for the annual GDP estimates:

- (1) for the agricultural activity—the compilation of the national accounts uses different sources of information provided by government offices involved in this activity, producer associations, and foreign trade statistics;
- (2) for mining and quarrying—the data are provided by government offices and private companies;
- (3) for the manufacturing industry—the main sources are government offices, private companies and producer associations;
- (4) for private construction without public financing—administrative data on construction permits;
- (5) for public construction, administrative government sources;
- (6) for transport activity—data from various sources on amounts provided by type of service and the number of vehicles registered, among many others;
- (7) for financial institutions—detailed information from SUGEF and financial statements;
- (8) for public communications, electricity, and water and sewerage—companies' financial statements and direct information from the corresponding institutions;
- (9) for the general administration—administrative data from each of the levels of government, and
- (10) for other services, particularly for personal and business services—the information used

in the estimates is among the weakest. Nevertheless, special efforts have been made to obtain information for the most dynamic modern services that would have been undervalued by traditional indicators, such as employment, given the rapid growth of labor productivity in the referred activities.

The main data sources for the quarterly GDP, by production and expenditure approaches, are mentioned below.

The main data sources for quarterly GDP, by economic activity, are as follows:

(1) **Agriculture:** The data on quantities harvested, sold on the local market, or exported are obtained from government offices, customs records, and records from producers or traders of agricultural products and processing industries.

(2) **Construction:** There are monthly records for the private component (construction permits). Calculations are based on information contained in construction permits, particularly data on the surface area (in square meters) of new constructions, purpose of the construction, materials to be used in the floors and walls of the building, the construction prototype (homes, commercial or industrial premises, warehouses, etc.), as well as an average timetable of project implementation; supported by a survey conducted by a firm of engineers and architects, that is used to determine the cost structure of each type of construction at constant prices (base year 1991). An average time-lag is incorporated into the calculation, and the BCCR asks the INEC to eliminate the permits that are not executed. However, it is not investigated how much construction work is effectively executed. The allocation of the cost components through time of all the permits from the same prototype and month, permits the estimation of the value of the output at constant prices, on an accrual basis.

(3) **Electricity, gas, and water:** Administrative monthly records.

(4) **Trade:** Data on sales reported by a sample of commercial enterprises, which are deflated using appropriate indices to obtain indicators for this activity at constant prices.

(5) **Transportation, storage, and communications:** Sources include the statistics on tons of merchandise moved in ports, number of tourists entering and leaving the country, minutes of telephone communication and on-line communication consumed domestically; passengers/kilometers transported per plane, passengers/kilometers and cargo kilometer transported by aircraft, and monthly imports and exports at constant prices.

(6) **Financial intermediaries:** Financial statements provide the basic data required. For intermediate financial services indirectly measured (FISIM), a volume index of deposits and loans is estimated by adding their value at current prices, deflated by a price index of wide coverage. In practice, the CPI is used. The volume index is used to extrapolate the value of FISIM in the reference 1991 year. As for financial services explicitly charged, their value at current prices is deflated by the total CPI to generate a volume index that could be used to extrapolate the reference period value of these charges. A price index of commissions and

fees should be used, but is not available, so compilers use the total CPI instead, which is an inadequate practice.

(7) **Business services:** The activities included in this item are legal, engineering, architectural, and advertising services. Volume estimates are based on quantities of services generated, i.e., for legal services—notary services and trials; in the case of advertising services—the number of advertisements broadcasted on radio, television, and the press. Finally, for engineering and architectural services, the index of private construction is used as an indirect indicator of the growth of the generated output at constant prices.

(8) **Hotels and related activities:** Estimates are based on information of output reported by the producer companies and indirect indicators of related activities.

(9) **Public construction, real estate services, public administration services, and communal, social, and personal services:** No monthly indicators are available. They are estimated, expressing in monthly terms the annual rate of change forecast for each activity in the most recent projection for GDP.

The principal data sources for quarterly GDP estimates by expenditure approach are:

(1) Monthly report of expenditure on final household consumption is compiled on the basis of administrative records from commercial establishments.

(2) Government final consumption expenditure is estimated using government administrative sources.

(3) For gross fixed capital formation, the INEC provides information on private construction based on construction permits, and expenditure on machinery and imported equipment based on Customs information.

(4) The value of exported and imported goods is estimated by using Customs data. For transactions on services with the rest of the world, data are taken from the balance of payments.

(5) The value of changes in inventories is mainly obtained as a residual when balancing supply and uses at an aggregate level.

Quality assessment of main data sources for annual estimates of GDP by economic activity is shown below.

The assessment of data sources is based on the approximation to the 1993 *SNA*'s definitions, scope, classifications, valuation and time of recording—with ranking on a scale of 1 (Good) to 4 (Bad).

Activity	Data quality assessment
Agriculture, hunting, forestry and fishing	
Administrative records	2
Surveys and censuses	3
Other sources	2
Mining and Quarrying	
Administrative records	3
Surveys and censuses	2
Manufacturing	
Administrative records	2
Surveys and censuses	2
Other sources	2
Electricity and water	
Administrative records	1
Private construction	
Administrative records	2
Surveys and censuses	2
Other sources	2
Public construction	
Administrative records	2
Surveys and censuses	2
Trade, hotels and restaurants	
Administrative records	2
Surveys and censuses	2
Other sources	2
Transport, storage and communications	
Administrative records	2
Surveys and censuses ²	2
Other sources	3
Financial services and insurance	
Financial intermediation except insurance	
Administrative records	1
Insurance	
Administrative records	2
Surveys and censuses	3

Real Estate	
Administrative records	2
Surveys and censuses	3
Other sources	3
Other business services	
Administrative records	3
Surveys and censuses	2
Other sources	3
Public administration	
Administrative records	2
Community, social and personal services	
Administrative records	2
Surveys and censuses	2
Other sources	3

Recommendation: Conduct a survey of construction enterprises that follows the physical progress of construction projects and works.

Recommendation: Strongly support the execution by INEC of the programmed surveys and other statistical activities included in the agreement between the BCCR and INEC, in order to improve the quality of the database available for updating the national account reference year and its compilation on a current basis.

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

In some cases, the source data are not consistent with the definitions, scope, classifications, and valuation principles of the national accounts. Thus, adjustments are made, when possible, to the source data as part of the process of validating the data for compiling the accounts. special effort took place on the occasion of changing the reference year, as the consistency of the results from the surveys was reviewed and adjustments were made, including those due to undervaluation of the results. The corrections involved adjusting the valuation to account for underreporting of income and overvaluation of production costs. The opinion of accounting experts interviewed contributed to this exercise.

3.1.3 Source data are timely

Source data such as prices, international trade, balance of payments, and monetary statistics are timely, while the time lag for government finance statistics is longer but adequate for national accounts purposes.

3.2 *Assessment of source data*

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

For the manufacture and trade surveys coverage is known, misclassifications are corrected, and non-response is adequately handled. Source data are analyzed in the context of revisions. All material changes from available up-to-date data are incorporated into the national accounts statistics according to a revision cycle that prevents the accumulation of revisions over long periods of time. Editing procedures identify outliers and other atypical differences in periodic responses by individual survey units. Extreme values are confirmed with respondents. Source data are analyzed to correct for misreporting, particularly temporal consistency. Consistency with other related source data are checked, when possible. Also, the accuracy of government finance statistics, merchandise trade statistics, volume and price statistics, and other secondary sources used to compile the national accounts statistics are assessed.

3.3 *Statistical techniques*

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

Compilation procedures minimize processing errors such as coding, editing, and tabulation errors. Adjustments to unit records are made only when clearly warranted. Procedures for imputation and adjustment for nonresponse, as well as estimation techniques to adjust data for missing observations are sound.

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

- Each person in charge of a given economic activity estimates the corresponding production and generation of income accounts. Estimates are made for 127 activities that are in the Supply and Use table. However, the 127 activities are classified into 121 activities for dissemination purposes. Also, supply and use accounts are generated and balanced for products or groups of products. Domestically produced goods and services, measured at basic prices, are classified by product, applying a national product classification based on the Central Product Classification (CPC).
- In the supply side, imported products are added at *fob* prices, the equivalent to basic prices for imports. The application of the Broad Economic Category classification (BEC) allows the disaggregation of the uses of total imported goods into three broad categories—imported goods for intermediate consumption, final consumption, and gross capital formation. The imported goods are presented in an aggregated manner, in three rows, one for each of the mentioned categories.

Margins of trade and transport are added, as well as net taxes on products, which convert supply from basic to user prices. The provisional allocation (through the commodity flow method) of the supply to the different intermediate and final uses permits the allocation of the estimates to the total supply and use table.

In the disseminated supply and use table, 121 activities are distinguished in the columns, which correspond mainly to a four-digit level for ISIC Rev.2. activities. The rows register transactions for 170 products. However, two aspects must be explained. Since in the initial 1991 table it was not possible to separate by products the imported goods, they were aggregated in the three use components explained above. Also, the intermediate uses of domestically produced products were aggregated in one column for total intermediate consumption. The limited information provided to users of such a supply and use table should be emphasized, because an important part of the information generated by the staff is lost for users, due to the fact that the detailed data generated is aggregated. The supply of domestically generated products demanded for intermediate uses is not distributed through the columns of the different activities, but aggregated in the corresponding cell of the column opened for the total intermediate uses. The imported goods are assigned to the three uses—intermediate consumption, final consumption, and gross capital formation—without disaggregating them.

Consistency is reached by balancing supply and uses for each product or group of products, obtaining as residuals the changes in inventories. The balancing process is taken one step further for the total table, until a balanced table is obtained.

The annual supply and use tables are estimated also at constant prices, making use of extrapolation by volume or quantity indices in some cases and deflation in other cases. As for most agriculture products, available prices and quantities permit the direct estimation of the output as current quantities, multiplied respectively by current prices and 1991 prices. Fixed intermediate consumption/output coefficients are applied, although, they may change in the process of balancing the total table.

The following discusses the issues specifically related to the application of the production approach (i.e., GDP estimation by economic activity).

Production approach procedures

Coverage of the non observed economy

Illegal activities are not separately investigated. Also, informal activities are not adequately covered, as the establishment surveys conducted by the BCCR includes in the corresponding samples, establishments with more than 20 employees. This implies that when extrapolating the reference year by the volume indices estimated by the surveys, the relative participation of own-account workers and small establishments in the generation of output that existed in the reference year is kept constant.

The reliance on fixed ratios derived from benchmarks or other sources is monitored

For most of the activities, a constant 1991 intermediate/output is applied, although their value may change as result of the supply-uses balancing process. This implies that values are not the result of direct research.

Techniques used to address specific issues of GDP compilation

- **Owner-occupied dwellings:** Output should be valued as the estimated rentals that tenants would pay for similar accommodation. However, in practice, a national average rental is applied to the estimated stock of dwellings occupied by owners. Various average rentals should be used to take into account a typology of dwellings based on characteristics, such as type of dwelling, location, and others. The market rental of a dwelling occupied by the owner must be for a non-furnished dwelling, as the durable consumer goods acquired by the owner are recorded as part of final consumption expenditure. This is not the case of a company that specializes on maintaining a stock of furnished dwellings for rent.
- **Work in progress:** Main growing crops and large construction projects are treated as work-in-progress.
- **Inventory valuation adjustment:** If inventories data are used in the estimates of output, output should be adjusted for holding gains/losses accruing on inventories. However, most of the changes in inventories are obtained as residuals.
- **Consumption of fixed capital:** Due to lack of information, the value of accounting depreciation recorded in financial statement is introduced in some accounts. In other accounts, aggregates are presented only in gross terms.
- **Cash vs. accrual:** Cash data are used for government expenses in the preliminary data. However, they are approximated to accruals by taking into account commitments instead of effective cash flows.

Proper procedures are followed for compiling volume measures of GDP

- **Double indicator method** is practically not applied. Single indicator methods are applied, trying as much as possible to use representative output and other indicators to extrapolate the value of the reference year, or deflate the output at current prices of the current year.
- **Volume measures of taxes/subsidies on products** are estimated by extrapolating the base-year tax/subsidy using a volume extrapolator of transactions subject to a specific tax/subsidy.
- **Output volume of trade margins** are generally estimated by extrapolating the base-year-trade margins using volume extrapolators of sales.

- **Measurement of volume change:** Volume changes are measured at 1991 prices, which implies applying obsolete relative price relations, distorting the relative importance of aggregates measured at constant prices. A project is in place to update the reference year of the national accounts.

Expenditure approach procedures

The GDP estimates by expenditure components are derived independently

Although it would be desirable to derive independently (i.e., not as a residual) the main aggregates, in fact household final consumption expenditure, is estimated by products making an excessive use of horizontal supply and use coefficients. Gross-fixed capital formation is mainly estimated by the commodity flow method, and changes in inventories are mainly obtained as residuals.

Expenditure estimates are compiled using detailed classifications

A national product classification based on CPC is applied to household final consumption expenditure. The COICOP classification by purpose is not applied.

For government final consumption expenditure, education, health and general administration are distinguished, but a proper classification by functions, such as COFOG is not applied. Gross-fixed capital formation is compiled by type of assets, but not by activities.

The reliance on fixed ratios derived from benchmarks or other sources is monitored

An excessive use is made of fixed ratios, except for some aggregates that are directly estimated with adequate basic data, mainly from administrative sources.

Proper techniques are used to address specific issues of GDP compilation

- Government final expenditure excludes incidental sales.
- Expenses of residents abroad are included in household final consumption expenditure and in imports.
- Expenses of nonresidents in the economy are excluded from household final consumption expenditure and included in exports.
- Expenditures on items that are considered stores of wealth (such as jewelry, works of art) are included in the estimates of valuables, whenever source data permits.

Specific quarterly compilation techniques

Specific quarterly compilation techniques are in accordance with internationally accepted good practices

- The Chow Lin without indicator method is used as a benchmarking technique to activities that account for near a third of GDP. It uses the annual GDP projection made for these activities.
- Seasonal adjustment of quarterly estimates uses the internationally accepted TRAMO/SEATS software.

Recommendations:

Disseminate the most disaggregated supply and use table possible in terms of the imported products classified by CPC, as well as the intermediate uses of each domestic product allocated to the corresponding user activities.

Give high priority to the project on updating the reference year of the national accounts.

Incorporate the new features of the 2008 SNA that are particularly important for Costa Rica.

Based on data from PROCOMER, classify establishments in the free zones and “maquila” producers by economic activity, and their output by CPC products.

Improve the estimation of rentals for own-occupied dwellings by taking into account the type of dwelling, geographical location, and other characteristics.

Estimate consumption of fixed capital on the basis of the permanent inventory method applied to estimating the stock of fixed capital

Apply double deflation whenever possible, using the framework of the supply and use table, with expanded data on inputs by activity.

Investigate indicators for the main activities which contribution to quarterly GDP is estimated at present without indicator.

Use data from both households surveys and any other available source, to generate employment and income matrices, by crossing data on employment by economic activity, size, employment category, and income components to better capture the activities of the nonobserved economy.

Once the reference year is updated, apply chain indices to annually update the price relations and weights used in the national accounts at previous year prices. The loss of additivity may be explained to users as a needed cost for improving the volume growth rates of national accounts aggregates.

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

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

Data compiled from the main national accounts sources are validated against other available independent data sources. Enterprises surveys' information is assessed against enterprises financial statements, other administrative sources and information obtained from producer associations. Data on production of crops that are mainly sold abroad, obtained from the Ministry of Agriculture, are assessed against foreign trade statistics. However, information available on independent optional sources is limited.

3.4.2 *Statistical discrepancies in intermediate data are assessed and investigated*

All the available information is used in generating production accounts by activities and in balancing supply and uses for given products or groups of products. Detected discrepancies in intermediate data are assessed, investigated, and reconciled or removed. The resulting data are then entered into the supply and use table, in which framework a further balancing process takes place.

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

The supply and use framework is used to investigate discrepancies and eliminate them during the process of balancing the table. The possible causes of detected discrepancies are investigated and the revised figures are included. During the last phase of the process, the table is balanced by using changes in inventories as an adjustment variable.

Recommendation: Investigate changes in inventories directly as part of the establishment surveys by economic activity. The surveys should preferably include questions on changes in inventories of inputs, outputs, and merchandise acquired by the establishment, to be used without transformation for wholesale and retail sales.

3.5 *Revision studies*

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

Analysis of revisions is made alongside the national accounts compilation cycle to validate and explain the changes between preliminary data, estimated data (as they are called when disseminated), and definitive data. However, studies on long-term trends in the revision pattern to identify systematic biased revisions are not performed.

Recommendation: Conduct studies on long term trends in the revision pattern, and introduce adequate adjustments to the initial estimates if systematic biased revisions are identified.

4. Serviceability

4.1 *Periodicity and timeliness*

4.1.1 Periodicity follows dissemination standards

The periodicity of quarterly GDP follows SDDS standard.

4.1.2 Timeliness follows dissemination standards

Quarterly GDP is disseminated one quarter after the reference period, meeting the SDDS standard.

4.2 *Consistency*

4.2.1 Statistics are consistent within the dataset

Internal consistency of annual GDP estimates by activity and expenditure and income components is obtained in the framework of supply and use tables, at current and constant prices for the first two and at current prices for income. Thus, there is no discrepancy between the GDP estimates using these approaches. Previous inconsistencies between national accounts and balance of payments have been eliminated.

As a result of obtaining consistent GDP estimates by expenditure and production approaches at current and constant prices, GDP series is consistent. For the same reason, GDP estimates at current prices, volume measures, and implicit deflators are consistent.

As for quarterly GDP estimates, the concepts, definitions, and classification used are in principle the same as those used to compile annual estimates. Consistency between quarterly GDP estimates by production and expenditure approaches are obtained by calculating changes in inventories as a residual. Quarterly GDP estimates are made consistent with annual estimates by obtaining some of the aggregates as the sum of the four quarters estimates or by benchmarking quarterly data into annual data using the Chow Lin method.

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

The national accounts time series with reference year 1991 have been consistent over time. The new series was linked with the 1966-based series, providing long term series to researchers.

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

National accounts data are consistent or reconcilable with balance of payments, GFS, and monetary and financial statistics. The current transactions of the Rest of the World in the national accounts and the balance of payments are consistent. The same figures are used in

US dollars to convert colones by applying the recommended average exchange rates. Any remaining difference is reconcilable. As for consistency between NA and GFS data, due mainly to adjustments made by national accounts compilers to register government transactions on an accrual basis, differences appear, but the reasons are known and data are reconcilable. National accounts and monetary and financial statistics use the same sectorization of economic units and the same classification of financial instruments, except for some exceptions that can be reconciled.

4.3 *Revision policy and practice*

4.3.1 *Revisions follow a regular and transparent schedule*

The underlying revision cycle is linked to the timing of preparation of periodic reports that the BCCR has to generate, based on its *Organic Law* (see 0.1.1.). In effect, the preliminary data for the previous year is prepared in February, for the BCCR's *Annual Report*. A revised estimate is generated at mid-year, which is disseminated to the public and used internally by the BCCR for purposes of monetary programming. The final version is prepared between August and November and used by the BCCR for consolidating the macroeconomic projections.

Although a pre-announced schedule for dissemination and revision of annual data is not provided to the public, a preliminary estimate and revision cycle is programmed for internal use and reasonably follows a stable pattern over time, well known to interested users.

When significant revisions outside the regular cycle are introduced affecting a given time series, the reasons are made known to the public. This was the case, for example, of the series of GDP per capita that was revised for the period 1991–2002 due to the dissemination by INEC of a new population series.

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

Users are informed about the preliminary nature of the data at the time of data dissemination through a mark in the corresponding columns and a note at the bottom of the tables.

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

Explanations to users on discrepancies between final and previous estimates are given only on special occasions. Revised series are generally disseminated without analysis of revisions. Studies on long-term trends in the revision pattern to identify systematic biased revisions are not performed.

Recommendation: Disseminate analysis of revisions on a current basis.

5. Accessibility

5.1 Data accessibility

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

Detailed national accounts estimates are disseminated with their corresponding time series in the BCCR's website. The annual series are disseminated for the last four years and a projection for the next year. Users can directly access the data from 1991 onward. The tables have a link to the methodological note.

5.1.2 Dissemination media and format are adequate

National accounts statistics are disseminated in ways that facilitate redissemination in the media. More comprehensive data are disseminated in the BCCR website. Current aggregates and longer time series can be accessed; the users can specify the dates for which they need the data.

5.1.3 Statistics are released on a preannounced schedule

An advance release calendar is disseminated in the BCCR website for the SDDS data categories, including the quarterly GDP estimates. Quarterly GDP data are released according to a preannounced schedule. As for annual national accounts data, an advance calendar exists but it is not provided to the public. Nevertheless, dissemination of the annual data follows a pattern well known to users.

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

The national accounts data are disseminated to all users at the same time through the BCCR's website.

5.1.5 Statistics not routinely disseminated are made available upon request

Non-confidential information is provided upon request. However, the public is not made aware of the availability of additional data and of the procedures for obtaining them. Nevertheless, an e-mail for queries is given on the BCCR's website.

5.2 Metadata accessibility

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

A detailed metadata for the annual national accounts series, with 1991 as the reference year, are disseminated on the BCCR's website. The metadata for quarterly GDP are also in the

BCCR's website and a summary methodology can be accessed through a link to the IMF website.

The metadata on annual national accounts provides information on concepts, definitions, classifications, data sources, compilation methods, statistical techniques, and other relevant methodological aspects and procedures. It was generated on the occasion of the dissemination of the new series based on the *1993 SNA*. Additional metadata for surveys, indices, and other indicators may be accessed from the BCCR and INEC's websites.

National accounts table on the BCCR website have links to methodological notes.

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

Different levels of data and metadata are made available to meet users' requirements. They may be accessed on the BCCR's website.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized

The name, telephone number, and e-mail address of contact persons are posted on the BCCR website and the DSBB. The BCCR's website is very user friendly.

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

Information on the BCCR's documents and services is available on the BCCR's website and Information Center.

Table 1. Costa Rica: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts
(Compiling Agency: Compiling Agency: Central Bank of Costa Rica (BCCR))

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment			X			Law 7839, that created the SEN, in its Article15(d) establishes that INEC should produce “basic statistics required to compile the national accounts ... on charge of the Central Bank of Costa Rica,” recognizing the fact that they are compiled by the BCCR. However, neither a law nor other formal provision specifically assigns this responsibility to the BCCR. The law does not contain any provision to enforce primary data reporting by nonfinancial private units.
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				Illegal activities are not covered. ISIC rev. 2 is being applied. COICOP is not applied to classify households final consumption expenditure, while COFOG is not applied to classify government expenditure by functions. Some foreign trade transactions of the high tech industry are not recorded at market prices. Interest paid by government on its external debt is recorded on a cash basis.
2.2 Scope			X			
2.3 Classification/sectorization				X		
2.4 Basis for recording		X				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
3. Accuracy and reliability						
3.1 Source data			X			Data sources are limited in scope for annual accounts and more so for quarterly GDP. Nevertheless, the BCCR's is making ample efforts to increase the database for the compilation of macroeconomic accounts and indicators. A new directory of institutional units and establishments has been contracted with, and generated by, INEC. Also an HIES was conducted, among other improvements.
3.2 Assessment of source data 3.3 Statistical techniques		X		X		The reference year of the national account is outdated and excessive use is made of 1991 fixed coefficients, implying that second best statistical techniques are applied. Due mainly to lack of data, some inadequate procedures are applied: Estimation of rentals for own occupied dwellings should be improved. Accounting depreciation is used instead of estimating consumption of fixed capital. Double deflation method not applied. Changes in inventories obtained as residuals. Chow Lin (without indicator) method is applied for benchmarking quarterly value added of activities comprising a third of GDP.
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			
4. Serviceability						
4.1 Periodicity and timeliness 4.2 Consistency 4.3 Revision policy and practice		X X	X			Explanations to users on reasons for discrepancies between final and previous estimates are given only in special occasions. Studies of revisions are not performed (see 3.5.1).
5. Accessibility						
5.1 Data accessibility		X				An advance calendar is made public for quarterly national accounts, but not so for the annual accounts. However, the annual data dissemination follows a pattern well known to interested users.
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

II. PRICE STATISTICS (CONSUMER PRICE INDEX)

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The Consumer Price Index (CPI) is compiled and disseminated by the National Institute of Statistics and Censuses (INEC). The legal foundation of INEC is provided in Law 7839 of November 4, 1998. Article 1 of the law specifies the creation of the National Statistical System (SEN) and establishes the INEC as its governing body. Article 2 governs the production, preparation, and dissemination of statistics by the SEN. Article 3 states that in generating statistical information, the government agencies comprising the SEN shall apply a standardized system of concepts, definitions, statistical units, classifications, nomenclatures, and codes to allow for comparison, integration, and analysis of the data and results. The INEC is charged with issuing appropriate technical regulations. Article 10 specifies that information will be provided to INEC on a voluntary basis. Article 11 states that information may be provided in writing or on electronic media, subject to compliance with this law. It also specifies that the information requested by INEC shall be provided to INEC free of charge. Article 15 of the law empowers INEC to produce the following statistics: (i) statistics based on administrative records, such as vital statistics and demographic statistic; (ii) population and housing statistics based on censuses; (iii) statistics based on multi-purpose household surveys, agricultural surveys, household income and expenditure surveys, economic surveys, price surveys for the consumer price index and the producer price index, foreign trade surveys, etc.

The compilation and dissemination of the CPI meet all legal standards since the index is mentioned specifically as part of the responsibilities of INEC.

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

INEC is self-sufficient in producing and compiling both the CPI and the household income and expenditure survey, which provides the basis for selecting the market basket list of items for monthly price collection and the weights for the index. No other agencies are involved in the compilation of the CPI.

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

Article 51 of Law 7839 establishes that violations of the statistical confidentiality by government employees or other individuals or legal entities that provide service to SEN units will be penalized under Article 203 of the Penal Code and will also constitute a serious labor violation when government officials are involved. These provisions are also strengthened in Articles 33 and 34 of the law. Article 4 of Law 7839 establishes that the agencies and units that make up the SEN must compile and handle statistical data according to the principles of confidentiality, transparency, specialization, and proportionality. Further, the regulations for

the National Statistical System Law published on August 24, 2000 in the official gazette (*La Gaceta*) establish detailed rules regarding the handling of data by SEN entities, which are compatible with confidentiality. For example, Article 31 stipulates that for information requested from legal entities and individuals, “the confidentiality of the information provided shall be guaranteed, wherefore data shall be disseminated and published only in the form of aggregates covering three legal entities or individuals, making it impossible to obtain individual facts or figures by a process of elimination.”

Computerized databases for compiling the CPI containing information from the individual records of respondents are protected by access codes. Only a few authorized persons, who are responsible for compiling the index, handle this information. In addition, the physical installations of INEC have surveillance services and security devices that prevent access by unauthorized persons.

In practice, INEC has established data aggregation procedures that prevent the disclosure of individual data, including those that could be identified by a process of elimination. Access to individual data is limited to officials directly involved in compiling the index. In addition, when files are delivered to research institutions, the data files are prepared in a way that maintains the confidentiality of CPI respondents.

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

The law establishing the SEN does not include the requirement that individuals or legal entities in the private sector must provide information for statistical purposes to INEC or other statistical agencies. The original draft of the law did consider both that requirement and the establishment of penalties for violations. However, the final version of Law 7839 was approved without these stipulations. Article 10 establishes that information will be provided on a voluntary basis. The law also specifies the manner and conditions under which the information must be provided. Article 11 of the law provides that the information must be submitted on hardcopy or electronically without charge to the statistical institutions.

Upon initial contact, respondents are given a letter signed by the INEC manager explaining to them the purpose of the survey and how the data they provide will be used. In addition, they are given a brochure summarizing the methodology of the CPI.

INEC makes every effort to foster a spirit of willingness by the public to collaborate with the statistical research that the institution conducts by focusing on improving its own image and that of its statistical products. To this end, workshops and seminars are conducted to present the products. For example, when the latest National Income and Expenditure Survey was released, a symposium was organized to present about 30 research projects based on the survey results carried out by various investigators from the government and the academic community. In addition, INEC makes several presentations on the CPI each year on the basis of requests from local universities.

In practice, INEC has virtually no difficulty obtaining price data from its respondents for the monthly price survey.

0.2 Resources

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

In general, the staff and financial resources available for compiling the CPI are adequate. The compilation of the index is well supervised and the review of the monthly price survey data is comprehensive. However, the geographic coverage of the index is restricted to the four central provinces due, in part, to the lack of resources available for compiling the index in the three outlying provinces. It is expected that regional offices will be established in conjunction with the new quarterly employment survey. The establishment of these regional offices would greatly facilitate expanding the coverage of the CPI to all urban areas of the country.

The Price Index Section responsible for overseeing the compilation and dissemination of the CPI is part of the Continuous Statistics Division of the INEC. The Price Index Section consists of three professional with university degrees, two technicians, and six administrative assistants responsible for data collection and data entry. The Price Index Section also has primary access to a computer programmer from the Information Technology Section who is assigned specifically to the CPI project.

The Price Index Section staff is experienced and well trained. Several staff members have recently participated in overseas training programs on the price index compilation and methodology provided by the IMF and the National Institute of Statistics of Spain (INE).

Computing equipment and information technology support are adequate for compiling the CPI. Each staff member is assigned a computer and has access to the internet. The CPI is compiled using an SQL Server database and software programmed in Visual Basic.

The physical facilities and vehicles are well maintained and adequate for the statistical surveys that are conducted by INEC. There are a number of new double cabin trucks that will be used principally for the Census to be conducted in 2011. However, these trucks are an integral part of the stock of vehicles available for all INEC field work.

0.2.2 *Measures to ensure efficient use of resources are implemented*

The new accounting system allows the measurement of costs by project. However, work on the CPI is combined with work for the International Comparison Program (ICP) and the Construction Cost Index for the purposes of this accounting system. Work on the ICP accounts for up to 20 percent of the work of the Price Index Section when the program is functioning, and work on the Construction Cost Index accounts for approximately 10 percent.

0.3 *Relevance*

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

Although the SEN Law calls for the creation of an Advisory Committee, this has not yet happened. Currently, there are no formal procedures for consulting with users in order to obtain information on their specific needs and reactions to the index. However, INEC is involved in a World Bank project to strengthen the SEN. The establishment of advisor groups for the official statistical series is part of this project

During the recent CPI revision project, an informal working group was established to obtain feedback on index compilation methodology for the development of the new CPI. This group consisted of principal index users within the government and the academic community. In addition, there is a National Commission on Salaries that meets twice a year to review issues relating to adjustments in the minimum wage, adjustments in salaries for the public sector, and the effect of the CPI on wage negotiations. The committee is made up of the Ministry of Economy, the Ministry of Labor and Social Security, labor unions, and the INEC. Experts from the universities and the BCCR are also invited to participate.

INEC participates in international and regional seminars and training courses on index compilation methodology for the CPI. In particular, staff are sent regularly for training on price index compilation methodology to seminars provided by INE of Spain and the IMF. In addition, INEC participates fully in meetings and research associated with the harmonization of statistical series within Central America, Panama, and the Dominican Republic.

Recommendation: Establish a formal CPI advisory group comprised of important index users from the government sector, the business sector, labor unions, the press, and academia.

0.4 *Other quality management*

0.4.1 *Processes are in place to focus on quality*

INEC has demonstrated a strong commitment to improving the quality of its statistical products as well as those produced by other entities within the SEN. INEC has developed a five year Institutional Strategic Plan for 2006–2010 in the context of its work on a National Strategic Plan for Statistical Development. The goals of this plan include:

- Producing statistical products that are funded with the ordinary budget of the Republic;
- Improving the quality of the information provided by the statistical products;
- Improving the statistical infrastructure;
- Improving the supply of strategic statistical products that can be produced with viable financing;

- Improving the means of dissemination of statistical products that are used in decisions concerning national development;
- Educating users of all types on official statistics;
- Strengthen the organization and functioning of INEC; and
- Strengthen the functionality of the SEN.

A draft of the national statistical plan will be available in July 2009 and the final version is expected to be available in April 2010. Work on this project is being carried out under a National Statistical Development Strategy (NSDS) grant from the World Bank.

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

Within the INEC, processes are in place to focus on quality and to monitor the quality of the collection, processing, and dissemination of price statistics. Every two to three months, training sessions are held with the price collectors to ensure that the quality of the price collection effort is maintained. Price collection assignments are rotated every month to guarantee that the specification data are adequate to identify the exact product for which prices are collected, as well as to ascertain that the price collection tasks are being carried out properly. To guarantee that the index compilation software is functioning properly, a separate compilation of the index is done in EXCEL using detailed price data at the product level and detailed market basket weights.

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

Trade-offs among the different dimension of quality are analyzed. The CPI is compiled only for the urban areas of the central provinces in recognition of tradeoffs between timeliness and geographic coverage within a given amount of financial resources. The INEC plans to extend the geographic coverage of the index when provincial INEC offices are opened for the compilation of the quarterly employment survey.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis

Only technical criteria are applied in compiling the CPI. There is no outside influence in any part of the process of compiling the CPI, and the compilation is done according to a pre-established methodology.

INEC is an autonomous institution of the State and as such enjoys independence in carrying out its functions. The head of INEC is appointed by the Board of Directors, which is made up of representatives from the various sectors of society as established in the SEN Law. The

INEC staff is appointed through an internal and external competitive process based on professional qualifications. In addition, the INEC gives presentations about the CPI to universities and labor unions. The INEC's mission statement, along with its institutional goals, is posted prominently on its website.

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

The choice of data sources and statistical techniques is guided solely by considerations of a statistical nature, taking into account resource availability and response burden. The Price Index Section always refers to the latest internationally accepted methods for the choice of source data and statistical techniques. The implementation and adoption of these methods in Costa Rica is thoroughly discussed among the INEC staff as well as other officials in the government and academic community. Final decisions on the methodology used for index compilation are made public on the INEC's website. The timing and format of dissemination of statistical data are determined by the INEC solely based on statistical considerations. The index is released in accordance with a published advance release calendar.

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

The INEC is authorized to make public clarifications regarding erroneous interpretations or misuse of its data. There have been no instances when the integrity and accuracy of the CPI have been questioned.

1.2 Transparency

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

The terms and conditions under which the CPI is compiled and disseminated are determined in Law 7839, which is publicly available. The law was published in the official gazette and is also available from the INEC website. Printed copies of the law can be purchased for the cost of printing at the INEC Information Center.

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

No one outside of the INEC has prior access to the CPI before it is released.

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

All of the publications of the INEC identify the source of the published data. The press release reporting the data to the media bears the printed logo of the INEC. The INEC requires that explicit reference be made to the data source when its data are reproduced in the publications of other agencies and in the press.

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

Major changes in the CPI compilation system are discussed in advance with important user groups prior to the release of the new index series. The reporting of methodological changes to the general public is made simultaneously with the release of the new series.

1.3 Ethical standards

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

The INEC service regulations establish (Title V, Chapter 1) the standards of behavior for its staff. These are made known to staff in orientation sessions when they join the institution and are periodically reviewed in monthly bulletins issued by the INEC human resources unit.

The service regulations are available to all INEC employees. Ethical standards are observed in practice and management monitors compliance with these standards.

2. Methodological soundness

2.1 Concepts and definitions

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

The determination and specification of CPI market basket items and the estimation of corresponding weights are based on concepts and definitions of household expenditures relating to consumption that are consistent with the *1993 SNA* and the *CPI Manual*.

Expenditure data on both services and commodities are tabulated in sufficient detail to permit analysis at levels of detail that exceed the level of detail of the four-digit Classification of Individual Consumption by Purpose (COICOP).

2.2 Scope

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

The 2004/2005 National Survey of Income and Expenditures (Encuesta Nacional de Ingresos y Gastos–ENIG), upon which the CPI market basket weights are based, covered all geographic regions and all socio-economic groups in Costa Rica. However, the CPI is compiled only for the urban households residing in the provincial capitals of San José, Alajuela, Heredia, and Cartago in the country's Central Region. All socio-economic strata are represented in the CPI. In the case of households with unincorporated businesses, household consumption expenditures are separated from expenditures relating to production. Excluded from the index's reference population are groups of more than seven non-related individuals living in the same housing unit.

The value of goods produced for own consumption are included in the CPI market basket weights. However, the value of owner-occupied housing services is not included in the market basket. This presents a problem, especially in Costa Rica where 85 percent of the households own their own homes. Rental payments, however, which account for over four percent of the total index market basket weight, are included in the index. If a rental equivalence weight were included for owner-occupied housing, the combined weight for housing services would be approximately 20 percent.

At the time that the new CPI was being developed, a number of studies were carried out in an attempt to determine an appropriate methodology for measuring housing costs for homeowners. However, it was concluded that the estimates of imputed rent given by the survey households were not reliable and that the estimated rents obtained using regression analysis were also not reliable. It was felt that the rent sample was too small and that the rental units were unrepresentative of owner-occupied housing units.

The difficulty of measuring the cost of an index component is not usually a good justification for excluding that component from the index, especially when its potential weight is so significant. In a country where 85 percent of the households are homeowners, the coverage of the index is weak without a component to represent the cost of owner-occupied housing. International recommendations call for either using rental equivalence/user cost or net acquisition of residential housing stock.

Recommendation: Include a rental equivalence component in the CPI market basket to represent the cost of owner-occupied housing.

2.3 Classification/sectorization

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

The classification system used for the CPI is a slightly modified national version of COICOP. Although certain sub-components of COICOP have been moved from one major group to another, and the order and composition of some of the major components have been changed, the national version of COICOP can be mapped easily into the international version of COICOP.

The COICOP-based national classification and coding system used for the CPI is composed of 12 Divisions or major groups, 31 sub-groups, 54 classes, 82 sub-classes, 292 articles, and 389 varieties.

It should be noted that there are two slightly different five-digit versions of COICOP being employed around the world. The first, COICOP for Household Budget Surveys (COICOP-HBS), is generally used for household income and expenditure surveys and for consumer price indices. The second, COICOP for the International Comparison Project (COICOP-ICP), is used for producing purchasing power parity estimates.

Since Costa Rica is part of a project to harmonize national statistics across Central America, Panama, and the Dominican Republic, INEC is compiling a Harmonized CPI that will employ an international version of COICOP. This will require extra work since the national classification system used for the CPI will be different from the classification system used for the harmonized CPI. This is especially the case since the composition and order of the major groups are different.

Recommendation: Change the national version of COICOP used for the CPI so that it corresponds with the international version of COICOP being used for the harmonization project for Central America, Panama, and the Dominican Republic. This system should have approximately ten digits and should be developed taking into account the classification systems used for the harmonized CPI for Central America, Panama, and the Dominican Republic, as well as the classification system used for the purchasing power parity project. This same national version of COICOP should be used for the ENIG and personal consumption expenditures in the national accounts.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

Both market basket weights and monthly prices used in the compilation of the CPI are valued at market prices, including sales tax and applicable discounts. Detailed product characteristic data including terms of transactions are included as part of the specifications for monthly price collection.

2.4.2 Recording is done on an accrual basis

Both the expenditure data from the income and expenditure survey and the price data for the monthly price survey are recorded on an accrual basis.

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

The weights for durable goods in the CPI market basket are based on net purchases (the value of purchases less the value of sales) of these goods, in accordance with international recommendations.

3. Accuracy and reliability

3.1 Source data

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

The list of goods and services included in the CPI market basket and their corresponding index weights were derived from the 2004/2005 ENIG that was conducted during the period April 2004 through April 2005. This survey covered households from all socio-economic

groups in both the urban and rural sectors of the entire country. The sample of 5220 households was selected using a sampling frame based on the 2000 Population Census. A two-stage sampling procedure was used for the selection of households. Census enumeration areas (segments) were selected in the first stage, and households were selected in the second stage. For both stages, systematic sampling was used to ensure that all types of households were selected for all geographic areas. The sample was also distributed temporally over the survey year ensuring that all geographic areas were surveyed every month during the year. All data derived from the survey were adjusted for non-response and to values that correspond to the entire population.

Only expenditure data collected from urban households residing in the provincial capitals of San José, Alajuela, Heredia, and Cartago in the country's Central Region were used for determining the CPI market basket weights. The 114 urban districts covered in these areas account for 45.8 percent of the population, 71.7 percent of the urban population, and 46.5 percent of all housing units in the country. These urban districts also account for 59.3 percent of the consumption expenditures for the entire country and 77.9 percent of consumption expenditures for the urban population of the country.

During the last revision of the CPI, consideration was given by the CPI working group to including expenditure data from all urban households in estimating the market basket weights for the index. However, since monthly price data were being gathered only in the Central Region, and there were no data on the relative behavior of prices in the outlying urban areas as opposed to those in the Central Region, it was decided that it would not be appropriate to include the outlying urban areas in determining the market basket weights. Nonetheless, the lack of geographic coverage in the CPI is a deficiency that should be addressed. Since price indices are robust and measure changes in prices, rather than levels in prices, it is not unusual for the weights to represent a wider geographic area than the monthly price survey.

Each month, approximately 14,200 price quotations are collected for 389 varieties of 292 products from 1840 outlets in 114 urban districts in central Costa Rica. Most of these data are collected through personal visits. All data collected for the CPI are processed and tabulated at the INEC's facility in San Jose.

Recommendation: Expand the geographic coverage of the CPI to include all urban areas of the country. If it is not possible to collect prices in all urban areas, the market basket weights should reflect household expenditures from all urban areas.

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

The 2004/2005 ENIG provided detailed expenditure data for 2,415 goods and services for the geographic areas covered by the CPI. This level of detail was more than sufficient for selecting an item sample for the CPI market basket. The concepts and definitions also match those of the CPI. However, the classification system used for the ENIG is a national classification system that is basically a sequential list of items across all major groups. This does not present a problem for the development of a CPI market basket since the level of detail is sufficient. Nonetheless, it would be desirable to use a common national classification system based on

COICOP for the CPI, the purchasing power parity project, and personal consumption expenditures in the national accounts.

3.1.3 Source data are timely

Prices are collected for the monthly CPI survey up to the second to the last business day of the month. The index is published on the second business day of the month. This is a notable accomplishment in terms of collecting prices during the entire month and the ability to include all of these prices in the index.

3.2 Assessment of source data

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

Source data for the CPI are monitored on a continuous basis for errors of all types. For the monthly price survey, the price and specification data on the survey forms are checked for completeness and accuracy in the field. Then the captured price data are subjected to automated checks for atypical and/or extreme values. Any atypical/extreme values that are identified by this process are checked for data entry errors. If problems persist, the respondent is contacted a second time to verify the accuracy of the price data. Consistency checks are also made across the dataset. In addition, the price collectors are rotated on a monthly basis. The INEC has found that the rotation of the price collectors helps to identify errors of misspecification of products and/or collecting prices for the wrong products.

For the ENIG, the entire process of sampling the households, coding the data, collecting the data, and tabulating the data is monitored. Numerous consistency checks are made at every step of the process. Variances were calculated for a number of different types of aggregations of the survey results. These variance data will serve to guide future surveys.

3.3 Statistical techniques

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

Due to the temperate climate in Costa Rica, there are no products in the CPI market basket that are seasonally unavailable. However, substitute product specifications/outlets are made for product specifications/outlets that become permanently unavailable. For temporarily unavailable product specifications/outlets, prices are imputed in one of two ways. If 50 percent of the prices for a product are available, the price for the product/specification/outlet is imputed using the prices of the same product in other outlets. When less than 50 percent of the prices for a product are available, the price is imputed using the price movement all products in the subclass to which the product pertains.

Elementary aggregates are computed using a matched price methodology. In general, only implicit quality adjustments are made. The price for a non-comparable substitute product specification/outlet is left out of the compilation of the index until it is available for two

consecutive months. Direct quality adjustments are generally not made except for adjustments in quantities of the product.

Recommendation: Closely monitor markets to identify the need to incorporate quality changes in the CPI, and prepare a plan to implement related changes.

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

For the CPI market basket, all of the weights are estimated in a manner consistent with the 1993 SNA and the *CPI Manual*. In particular, goods produced for own consumption are valued at market prices, and durable goods are valued at the market value of the good at the time of purchase regardless of the method of payment.

The index is compiled using the short-term formulation of the Laspeyres index formula for higher level aggregates. Elementary aggregates are estimated using the geometric means. Market basket weights derived from expenditure data from the 2004/2005 ENIG were updated to July 2006, which is the reference base for the CPI. The old CPI was linked to the new CPI using the new reference base of July 2006. This was done at the all-items or total CPI level since many of the aggregates for the new index are different from those of the old index.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information, where applicable

No checks are made by comparing the CPI indices with similar indices from the PPI, agricultural price indices, or implicit deflators from the national accounts.

Recommendation: Initiate procedures to compare, on a regular basis, the behavior of consumer price indices with the behavior of similar series from the PPI, the agricultural price indices, and implicit deflators from the national accounts.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Consistency checks are made on a monthly basis to identify atypical price levels and price movements. This is done for the price movements by comparing price changes from the previous period to the current period for all price quotations for a given product. Any atypical values are investigated and corrected when appropriate.

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

There is only one level of geographic compilation for the CPI. Hence, there is no potential source of inconsistency due to aggregation. With regard to imputation, the imputations for the index are self-correcting, except when the product does not reappear in the market. Although these imputations are not self-correcting, there is not a reliable method to identify possible biases in the index due to these imputations in the short term.

3.5 Revision studies

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

In November 2006, the INEC sponsored a symposium on the 2004/2005 ENIG. The results of 30 studies presented at this symposium are available on the INEC's website. The results of these studies will be valuable in designing new income and expenditure surveys. Doing these types of studies helps identify needs and possible errors and biases in the data.

The INEC also estimates and publishes variances for a number of types of expenditure aggregations. These studies are valuable in determining future household sample sizes needed to provide reliable data by demographic group and type of product.

4. Serviceability

4.1 *Periodicity and timeliness*

4.1.1 *Periodicity follows dissemination standards*

The periodicity of the CPI for Costa Rica is monthly. This meets the IMF's Special Data Dissemination Standard (SDDS).

4.1.2 *Timeliness follows dissemination standards*

The CPI is released on the second business day of the month following the close of the reference month. This exceeds the SDDS timeliness requirement that specifies 30 days following the reference month.

4.2 *Consistency*

4.2.1 *Statistics are consistent within the dataset*

The CPI is compiled only at the national urban level for the provincial capitals of the four central provinces. This minimizes the possibility of most types of aggregation errors.

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

Consistent time series index data for the CPI at the all items level are available for the period 1976 to the present. Since the composition of the major groups changed with index revisions, these time series are not available at the major group level. However, they are available at the product level.

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

The CPI price, weight, and index data are conceptually consistent and/or reconcilable with corresponding data from the national accounts and the PPI.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule

The CPI has been compiled in Costa Rica since 1936. The index was revised in 1952, 1964, 1975, 1995, and 2006. The current goal is to revise the index approximately every five years. It is expected that the new ENIG will take place in 2010.

4.3.2 Preliminary and/or revised data are clearly identified

The CPI is final upon publication.

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

Revision studies such as papers presented in the November 2006 Symposium on the ENIG and the results of variance analyses that have been carried out are available on the INEC's website.

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 monthly CPI is disseminated in a number of different hard copy formats:

- Monthly bulletin—gives a brief description of the index and presents a graph that shows the impact on the index in percentage terms of the major index groups, and several tables showing the monthly, quarterly, and 12-month index changes by major group, the items with the largest price increases and decreases, the monthly and accumulated index change for the major groups for the last two years, the all items annual index changes since 2000, and the monthly index changes for goods and services. A brief analysis for each table is also given.
- Press release—presents graphs that show that current month's monthly price change for the same month in the last nine years, the accumulated percent change in the current year compared to the same months for the previous five years, and the year to year index changes for the last nine years. Tables are also included that give the monthly, accumulated, and 12-month index changes for the major groups, the monthly index increases and decreases for the items with the greatest percentage impact on the all items CPI, and the monthly, accumulated, and 12-month price changes in the all items index for the last two years.

- Hard copy tables—present index levels for the current and previous month, and the monthly index change and the impact on the all items CPI by all levels of detail down to the product level, monthly, accumulated, and 12-month changes in the all items index for the last two years, an expanded list of items with the most impact on the all items index, the current month and previous month indices for goods and services and their impact on the all items index, index levels, monthly index changes and the effect on the all items index of regulated and non-regulated goods.

5.1.2 Dissemination media and format are adequate

More detailed index data for other time periods and for longer time periods are available on the INEC's website. The hard copy formats, also available on the website, are produced in such a manner that they facilitate reproduction in the media.

5.1.3 Statistics are released on a preannounced schedule

The CPI is released on a preannounced schedule on the second business day of each month.

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

In principle, the CPI is released simultaneously to all users, with no one outside the INEC having access to the index prior to its release on the second business day of the month following the reference month for the index. However, the process used for releasing the monthly index has some inherent problems. Between 9:00 AM and 10:00 AM, INEC begins sending out the index by e-mail, FAX, and hardcopy by courier to a list of users, including government officials who have requested the index. A press release is also distributed, and the index is posted on the INEC's website. However, the process of posting the index on the website has inherent delay, and the index may not appear until 11:00 AM or noon.

Recommendation: The process of disseminating the monthly CPI should begin with posting the index on the INEC's website. The index can then be sent out to the list of users by e-mail, FAX, and courier.

5.1.5 Statistics not routinely disseminated are made available upon request

The INEC's website shows a great deal of detailed index data over a number of years. Special tabulations of index data that do not violate confidentiality are provided for a fee.

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

Comprehensive metadata on the CPI are available on the INEC's website and in hard copy format.

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

In addition to the monthly bulletin that provides a brief description of the CPI, the INEC publishes two major methodological documents. The first, entitled *Principal Characteristics of the Consumer Price Index* presents general information on the history of the CPI in Costa Rica, a summary of the methodology used in compiling the index including details on the index formula, the new list of market basket items and weights, and comprehensive details on the methodology of linking the old index to the new index. A point by point comparison of the new index with the old index is also provided.

The second document is entitled *Methodology of the Consumer Price Index*. This document presents the methodology in compiling the new CPI in great detail. It also includes the historical series of the all items index with the old index linked to the new index for the period 1976 to July 2006 when the new index was published.

5.3 *Assistance to users*

5.3.1 *Contact points for each subject field are publicized*

The INEC has an information center that provides assistance to users. The address, telephone number, fax number, and e-mail address are indicated on all of INEC's publications.

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

INEC's website has a detailed list of publications and statistical products that can be accessed on the website.

Table 2. Costa Rica: Data Quality Assessment Framework (July 2003): Summary of Results for Price Statistics (Consumer Price Index)
(Compiling Agency: National Institute of Statistics and Censuses (INEC))

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				No formal mechanism for assessing user needs.
0.2 Resources		X				
0.3 Relevance			X			
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				Lacks component to measure housing costs for homeowners.
2.2 Scope			X			
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data		X	X			Part of the urban population not included in the CPI.
3.2 Assessment of source data						
3.3 Statistical techniques				X		
3.4 Assessment and validation of intermediate data and statistical outputs			X			Changes in product specifications/quality are introduced after there are two price observations available. Direct quality adjustments are not made. CPI indices not verified against other similar datasets.
3.5 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

III. PRICE STATISTICS (PRODUCER PRICE INDEX)

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The Industrial Producer Price Index which will be referred to in this report as the Producer Price Index (PPI), is prepared and disseminated by the Central Bank of Costa Rica (BCCR) based on the Central Bank's *Organic Law 7558* of November 3, 1995 and its subsequent amendments. Although that law does not indicate that the PPI must be compiled by the BCCR, Article 14(d) establishes that the BCCR must publish information on Costa Rica's economic situation every month, providing information on at least production, prices, currency, exports, imports, and gross and net international reserves. The unit within the BCCR that compiles the PPI is the Department of Economic Information (DGIE) of the Economic Division. Responsibility for compiling the PPI was recently transferred from the Economic Surveys Section to the Index Numbers Section both within the DGIE.

Under the terms and conditions of the law on the National Statistics System (SEN) (Law 7839 of November 4, 1998), which establishes the INEC and gives it the role of directing the SEN, producer price indices for goods and services are part of the basic national statistics that should be compiled and disseminated by the INEC. Although the legal authority for compiling the PPI has rested with the INEC, the plan to transfer the PPI from the BCCR to INEC was only recently formalized in an inter-institutional agreement of cooperation between the BCCR and INEC that was signed in July 2007. The scope of this agreement is broader than the eventual transfer of the PPI to INEC.

Originally, as prescribed in Law 7839, the responsibility for compiling basic economic statistics, including the national accounts, was to be transferred to the INEC in January 2003. However, Law 8284 which was passed in May 2002 abolished the portion of Law 7839 that required the transfer of the national accounts to the INEC. The wording of Article 15d of the Law 7839 was also modified to indicate that the INEC should compile the basic statistics that are required by the BCCR in order to compile the national accounts and other macroeconomic accounts. While this modification to Law 7839 left the BCCR with a clear mandate to compile the national accounts, the legal responsibility for compiling the PPI remained with the INEC. In fact, the PPI is specifically mentioned in Article 15c as a responsibility of the INEC.

The July 2007 inter-institutional agreement between the BCCR and INEC provides a framework for sorting out some of these legal and institutional issues, as well as improving the SEN in general. The intention is for the INEC to eventually collect and compile all of the basic data needed by the BCCR for the national accounts and other macroeconomic statistics. In this regard, the agreement specifies a number of statistical indicators and datasets, many of which are new, that are needed for the national accounts. Included in these are the PPI as well as producer price indicator for agriculture and different types of services. Financial resources and the responsibility for compiling these series are being transferred on a flow basis to the INEC over the next several

years. It is expected that the PPI will be transferred once new weights are estimated, new samples of establishments and products have been selected, and the compilation of the new index is firmly established. This is expected in 2011.

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

In general, the BCCR is self sufficient in the production of the PPI. Both the data for index weights and the monthly price data are collected and processed by the BCCR. Nonetheless, there are some problems with regard to obtaining detailed revenue data from the tax authority that could be used in constructing a sampling frame for selecting new samples of establishments and products for updating the PPI. The concern of the tax authority is that the confidentiality of the tax data will be violated if the data are made available at a detailed level. At present, the BCCR depends on data on the number of employees for establishments registered with the Social Security Office in Costa Rica to construct its establishment sampling frames.

In principle, the BCCR has access to tax information for statistical purposes only. However, it must respect the prohibitions and limitations established under relevant laws regarding data confidentiality.

Recommendation: The BCCR should explore the possibility of undertaking an official agreement with the tax authority to obtain information subject to strict confidentiality provisions.

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

All data used or generated in association with the compilation of the PPI is guarded by strict standards of confidentiality. Article 37(g) of Chapter IX of the Internal Labor Regulations of the BCCR indicates that "Employees must maintain the utmost secrecy regarding the operations, business, and actions of the Bank and its clients," and this is supplemented by Chapter XII on the sanctions applicable for failure to comply with this standard. In addition, the *Guidelines on Impartiality, Objectivity, and Integrity of the Staff of the Central Bank of Costa Rica* indicates in its Article 5 that, "... besides the legal dispositions that compel public servants to preserve the confidentiality of the issues under their knowledge ... staff must be discreet with regard to all facts and information they become aware when performing their functions ..." This requirement extends up to one year after the staff has terminated his/her relation with the BCCR, and in some special cases until the facts lose their relevance.

Sanctions are imposed (Article 230 of the Penal Code) in case of breach of data confidentiality in Article 132 of Law 7558. Breach of confidentiality by staff of the BCCR is considered a severe violation for employment purposes.

While there is no law that obliges the private sector to provide information to the BCCR for statistical purposes, requests from the DGIE for price data always specify the confidential nature of the data to be provided. Based on the opinion of the BCCR's Legal Counsel, this fact alone necessitates the confidentiality of the information gathered. In addition, Article 4 of Law 7839

establishes that all agencies belonging to the SEN are required to compile and process statistical data in accordance with the principles of statistical confidentiality.

All databases and computer systems used in compiling the PPI are password protected to prevent unauthorized access to data. Access by staff is limited according to need.

Measures are adopted to protect information when it is destroyed, an action that is subject to the National Archives Law. The BCCR's auditing unit monitors compliance with these provisions. Data storage facilities also have security measures to protect the data.

No special aggregation standards have been developed to ensure the protection of individual data. However, in practice, due to the confidentiality requirement, the aggregation principles followed are consistent with this requirement. Only employees responsible for data processing have access to the individual data. When files are provided for research purposes, precautions are taken by aggregating the data in a way that eliminates the possibility of identifying the respondent.

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

The reporting of data from public sector institutions for the compilation of the PPI is governed by Article 40 of the BCCR's *Organic Law*, which states that "Government offices and units and autonomous institutions shall be required to provide assistance to the departments of the Central Bank, so that they can carry out their functions efficiently." For this purpose, they must promptly supply them with the data, reports, and studies they request. Failure to meet this obligation on the part of responsible officials in government offices and agencies and autonomous institutions shall be considered a serious dereliction of duty. However, no such law exists for the data needed from the private sector.

Although there is no law that requires the private sector to provide price and revenue data for the compilation of the PPI, these data usually can be obtained on a voluntary basis. There have been some problems when establishments in the monthly price survey merge and/or placed under new ownership. However, most of these problems have been resolved by a personal visit to the establishment by a representative of the DGIE. In addition, the DGIE has made an effort to foster cooperation by providing the establishments with information on the PPI.

0.2 Resources

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

Up through April 28, 2009, there were two staff members of the Economic Surveys Section of the DGIE assigned to the compilation of the PPI—a specialist in institutional services in charge of price collection, data processing, and index compilation, and a statistician in charge of reviewing the index data. Neither of these staff members works full time on the PPI.

There are no significant financial constraints for compiling the PPI. However, in the 18 years that the index has been compiled, it has only been updated twice. Moreover, since the index was last revised in 2000, it has been marginalized, and responsibility for its compilation has been moved to various sections of the Economic Division. At the end of April 2009, the responsibility for compiling the PPI was given to the Index Number Section of the DGIE. A group of four staff members within the Index Number Section was formed to update the PPI in preparation for the eventual transfer of the PPI compilation to the INEC.

DGIE has sufficient information technology resources to ensure that the PPI is compiled in a timely and efficient manner. The collection of price data is done mostly by e-mail, facsimile, and telephone interviews. Data processing is done electronically, and the index is compiled in Excel.

0.2.2 Measures to ensure efficient use of resources are implemented

The BCCR has implemented a system of cost control for homogeneous products. In fact, in the last few years, the BCCR has increased the efficiency of compiling price indices through a combination of reducing the number of staff involved in this work and making the process more automated. However, the reduction in personnel dedicated to the PPI compilation meant that less time has been devoted to the analysis and review of the price data.

0.3 Relevance

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

In December 2003, the Division of Institutional Development (DDI) of the BCCR conducted a satisfaction survey of internal and external users to evaluate the quality of the services provided by the BCCR, including its statistical products. Several dimensions were evaluated, such as response time, service to clients, professionalism, organization, etc. At the time of this ROSC mission, a similar survey is underway at the BCCR, this time conducted by the Direction of Planning and Management Control.

Staff of the BCCR periodically participates in statistical meetings and seminars organized by both international and domestic organizations.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality

The BCCR has demonstrated a renewed commitment to quality through its plan to improve the quality of the PPI, the national accounts, and other macroeconomic indicators. An agreement has been signed with the INEC to provide a number of basic statistical datasets that are needed for the PPI and the national accounts. A number of new producer price indices for the service sector have been developed to replace the outdated PPI for services. A new business register has been compiled.

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

Although the quality of the monthly price data for the current PPI is monitored to the extent possible given the limited resources dedicated to the index, the establishment and product samples have deteriorated over time. While extensive efforts have been expended to design the new PPI, the current PPI has not been maintained to the extent that it should have been.

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

A program is in place to significantly improve the quality of the PPI during the next few years. A number of new indices that are being compiled will form part of the overall PPI system. The coverage of the PPI is being expanded to include exports, public services such as communication services, public transportation services, shipping, restaurant services, insurance, accounting services, and vehicle rental services. The work plan and the actual projects that have been completed thus far reflect a commitment to quality in the planning process.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis

Only technical considerations are applied in compiling the price indices. The DGIE is completely independent in selecting the sources and statistical methods it considers most appropriate for compiling the PPI. The results are not subject to any external or internal influence.

The legal provisions do not explicitly stipulate the professional independence of the staff responsible for compiling the price indices. However, professional criteria guide the selection of the BCCR staff by means of a publicly open and competitive process. There is no outside influence on the content or dissemination of statistical information.

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

The choice of data sources and statistical techniques is guided solely by statistical considerations within the constraints of resource availability and response burden. The DGIE always refers to the latest internationally accepted methods for the choice of source data and statistical techniques. The implementation and adoption of these methods are thoroughly discussed among the BCCR staff as well as other officials in the government and academic community. Final decisions on the methodology used for index compilation are made public on the BCCR website. The timing and format of dissemination of statistical data are determined by the DGIE in view of statistical considerations. The index is released in accordance with a published advance release calendar.

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

The BCCR is authorized to make public clarifications regarding erroneous interpretations or misuse of its data.

1.2 Transparency

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

The terms and conditions under which the PPI is compiled are explicitly defined in Article 14(d) of Law 7558. These provisions are available from the BCCR website and in printed form.

The methodology for compiling the PPI is available on the BCCR website and in hard copy at the BCCR's Information Center.

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

No one outside of the BCCR has prior access to the PPI before it is released.

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 DGIE. The BCCR identifies the source of the information in its publications. The source is usually mentioned in a footnote.

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

There is no advance notice of changes in methodology. These changes are disclosed to the public when the data incorporating the new methodology are published for the first time.

1.3 Ethical standards

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

Although there is no code of ethics strictly speaking, personnel regulations clearly establish workers' obligations. Recently, in the context of renewal and institutional modernization processes, the BCCR developed a basic set of values that include ethical principles such as honesty and loyalty. This set of values is also available on the BCCR website. Chapters IX to XII of the Internal Labor Regulations of the BCCR consider the obligations, prohibitions, and sanctions to which its employees are subject. Staff is informed of these rules.

2. Methodological soundness

2.1 Concepts and definitions

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

In general, the current PPI is constructed using methodology recommended in the *1993 SNA* and the *PPI Manual*. However, the index is compiled only for product aggregations and not by economic activity. Even though the first level of product aggregations is made at the four-digit ISIC Rev. 3 level, secondary products (defined as products corresponding to four-digit ISIC categories different from the four-digit category to which the establishment has been classified) are moved with their weights to the four-digit ISIC category to which these products belong. International recommendations require that the PPI be compiled both by product and by economic activity.

Recommendation: Compile the PPI by product and by economic activity.

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

The current PPI covers the entire manufacturing sector, including divisions 15–37 of the ISIC Rev. 3. Although the index covers all sales of production to the domestic market, sales of production for export are excluded. International recommendations require that export goods be included in the PPI.

A separate PPI for services, with a reference base of 1980 is also compiled by the BCCR. However, the weights, the establishment sample, and product sample for this index are very out of date. The BCCR is presently in the process of revising the PPI, along with the index for services. The two indices will be combined for this revision. New service components for the revised PPI, as shown below, have been compiled since September 2007, but have not yet been disseminated:

1. Medical services for non-residents;
2. Insurance services;
3. Ground (land) shipping services;
4. Ground transportation for non-residents
5. Air transportation for non-residents;
6. Restaurant services for non-residents;
7. Domestic air transportation;

8. Vehicle rental; and
9. Accounting and auditing services.

Some of these indices are complemented by service indices from the CPI, which are already being compiled. For the new PPI, the corresponding CPI components will be combined with these new PPI components. In addition, a number of other service components are being developed for the new PPI. These include service components that are currently part of the outdated PPI for services, such as electricity, water, public transportation, communication, and education.

Recommendation: Expand the coverage of the PPI to include export goods.

2.3 Classification/sectorization

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

ISIC Rev.3 is currently being used to classify economic activities for the PPI. Products are classified using the CPC. However, the products for which prices are collected for the PPI are implicitly being classified using ISIC Rev. 3 as a product classification. In fact, no compilation is carried out using CPC codes.

Recommendation: Develop a new national classification system that is a combination of an expanded version of the ISIC Rev. 3 and the CPC.

Recommendation: Consider making compilations of the PPI for product aggregation at a greater level of detail than the four-digit ISIC Rev. 3.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

In accordance with the 1993 SNA and the international *PPI Manual*, weights and prices are valued at basic prices at the factory-gate.

2.4.2 Recording is done on an accrual basis

Both producer prices and weights are valued on an accrual basis.

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

Transactions between establishments within the same enterprise are recorded on a gross basis for the determination of PPI weights, consistent with international standards.

3. Accuracy and reliability

3.1 Source data

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

Currently, there are few regular comprehensive industrial surveys that can be used to update the weights, the product sample, and the establishment sample for the PPI. However, plans are well underway to resolve this problem. A bilateral accord between the BCCR and the INEC to improve the basic statistical data needed for the national accounts and other macro-economic statistics has been signed in 2007. This accord specifies a number of basic statistical datasets that will be developed by the INEC with funding from the BCCR. As a first step in this process, a draft of the new business register is now available.

The weights for the current PPI were derived from an industrial survey of medium to large enterprises conducted by the BCCR for the reference year 1997. The sample of establishments was selected using a sampling frame developed from data on the number of employees by establishments registered with the Social Security office in Costa Rica. These data were analyzed extensively in forming the sampling frame stratified by number of employees. Establishments with less than ten employees were excluded. Establishments with more than 100 employees were designated self-representing.

Personal visits were made to the selected establishments to obtain sales data by product. Total sales by establishment (with the exception of sales for export goods) were distributed exhaustively across the products that were selected. The product weights were then expanded to reflect sales for all establishments by four-digit ISIC and then sales reflected in the national accounts.

Originally, 283 establishments were selected. After product selection, the sample was reduced to 216 manufacturing establishments from which approximately 1000 specific goods are to be priced each month. The pricing is done by telephone, fax, e-mail, and occasionally by personal visit to the enterprise. Currently, there are 179 active establishments from which 790 prices are collected each month.

The current establishment sample covers establishments that account for more than 80 percent of the value of the manufacturing sector. However, the weights reflect total sales of the manufacturing sector.

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

The monthly prices collected for the PPI reflect the definitions, scope, classification, valuation, and time of recording needed for the index. The prices used in the index are basic prices at the factory gate.

3.1.3 *Source data are timely*

Monthly price data for the PPI are collected in a timely manner.

3.2 *Assessment of source data*

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

The source data used to select the establishment and product samples and to estimate the weights for the PPI was thoroughly scrutinized statistically. A study was conducted to ensure that the weights were consistent with corresponding data from the national accounts, and the data on the number of employees by establishment from the social security rolls was reviewed using variance analysis.

The monthly price data are also evaluated using analysis of trade margins to account for the differences in the behavior of the PPI and the CPI.

3.3 *Statistical techniques*

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

All types of source data for the PPI are treated with statistically sound techniques. The weight data are verified using national accounts data. The sales data have been expanded to population levels using scientific techniques based on sampling fractions and non-response rates. The sampling frame for the establishment sample was constructed using statistical analysis at all levels of construction. The monthly price data for the PPI are carefully monitored for data collection and data entry errors. Missing prices are imputed using price changes for similar item and/or price changes for items in the same group.

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

The PPI is compiled using the short-term formulation of the Laspeyres index formula. Price relatives for the current period over the previous period are calculated at the product specification level and then aggregated to the four-digit ISIC level using product weights that reflect the product's share of sales within the four-digit ISIC level.

The index weights are not updated for price change between the survey reference period and the index reference period.

The weights, establishment sample, and product sample for the index have not been updated since the year 2000. Since the index should be updated at least every seven years, the index needs updating.

Recommendation: Update the weights, the establishment sample, and the product sample for the PPI.

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

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

On a regular basis, comparative analysis is conducted for the components of the PPI and corresponding components of the CPI. This analysis uses information regarding the demand for manufactured products, making it possible to detect possible changes in the trade margins, which could explain possible divergences in the trends observed in the two index series.

3.4.2 *Statistical discrepancies in intermediate data are assessed and investigated*

Any unusual movement in the PPI are documented and explained in *The Monthly Report of the Economic Situation in Costa Rica*.

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

Since the PPI is compiled only by product aggregates, there are no statistical inconsistencies to be investigated.

3.5 *Revision studies*

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

As part of the previous revision project in 2000, a number of revision studies were carried out. These included an extensive analysis to verify if the weights for the PPI were consistent with corresponding aggregates from the national accounts, an analysis comparing the variation of price changes in the new index with the old index for a year of overlap period, and a statistical analysis of the social security data on the number of employees used as weights for the establishment sampling frame. All of these studies were quite sophisticated and will provide very useful information for developing new source data and methodological techniques for estimating the weights and selecting the establishment and product samples for the new PPI.

At the present time, a comprehensive assessment of possible source data for a new PPI and the national accounts is being carried out. This includes analysis of data to be used for the service sector. This work is guiding the production of new source data for updating the PPI and the national accounts.

4. Serviceability

4.1 *Periodicity and timeliness*

4.1.1 Periodicity follows dissemination standards

The PPI is published on a monthly basis thus meeting the SDDS standards.

4.1.2 Timeliness follows dissemination standards

The PPI is disseminated on the fifth working day of the month after the end of the reference month thus exceeding SDDS standards.

4.2 *Consistency*

4.2.1 Statistics are consistent within the dataset

Since the PPI is compiled only for product aggregations, there are no internal inconsistencies due to aggregation or imputation.

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

Historical PPI data are available for the new PPI starting in 2000. However, a linked historical series is available at the total index level starting in 1991. The reference base for the linked series is December 1999, the reference base for the new PPI.

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

Although the ISIC revision 3 is used for the PPI and the ISIC Revision 2 is used for the national accounts, the weights for the PPI are reconcilable with the weights used for the national accounts.

4.3 *Revision policy and practice*

4.3.1 Revisions follow a regular and transparent schedule

The updates to the PPI are not done on a regular basis. It is expected that the index will be updated in 2010. The last update was in 2000 based on 1997 data.

Recommendation: Establish a policy for revising the PPI at least every seven years.

4.3.2 Preliminary and/or revised data are clearly identified

The PPI is final when published.

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

The sophisticated statistical analysis conducted during the 2000 revision concerning the comparison of the old and new index for a one-year overlap period, the selection of establishments using data on the number of employees, and the estimation of establishment and product weights is published as part of the PPI methodology.

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 monthly PPI is disseminated on the BCCR website on the fifth workday of each month. The website is user friendly and allows the user to choose the level of detail and the type of table that will be viewed. The options for level of detail include the total PPI with or without gas and the PPI by two-digit division of the ISIC Revision 3. The types of table include index level and percent changes. At the total PPI level, index data are available for the period 1991 to the present. These are linked series using December 1999 and the reference base. For indices by ISIC division level, the data are only available from 2000 to the present. These series were not linked due to the differences in the classification systems. ISIC Revision 3 is used for the current PPI and ISIC Revision 2 was used for the old PPI.

Index data for the PPI are also available in two BCCR publications: *The Monthly Report of the Economic Situation in Costa Rica* and *The Inflation Report*. These publications contain tables, graphs, and limited explanations of the behavior of the index.

5.1.2 *Dissemination media and format are adequate*

The format on the BCCR website and other publication is adequate for users. The levels of detail are appropriate and the length of the index series, from January 2000 to the present, is convenient. The total PPI is also available for the period 1991 to the present.

5.1.3 *Statistics are released on a preannounced schedule*

As prescribed by SDDS, the PPI is released according to a preannounced release calendar.

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

Monthly PPI data are released simultaneously to all users on the BCCR website.

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

Reasonable requests for PPI data, which are not available on the BCCR website, are accommodated so long as the confidentiality of the informants is not breached.

5.2 *Metadata accessibility*

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

A detailed document covering the methodology for compiling the PPI is available on the BCCR's website and in hard copy for the cost of copying the document. The SDDS metadata are also available using a link on the BCCR website.

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

5.3 *Assistance to users*

5.3.1 *Contact points for each subject field are publicized*

Information on the PPI can be obtained from the Index Number Section of the BCCR or from the BCCR Information Center. The BCCR's website provides contact information for each PPI table. This includes the names and telephone numbers of the persons responsible for the dissemination of the index.

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

The BCCR website has an extensive list of BCCR publications that can be accessed and downloaded without charge.

Table 3. Costa Rica: Data Quality Assessment Framework (July 2003): Summary of Results for Price Statistics (Producer Price Index)
(Compiling Agency: Central Bank of Costa Rica (BCCR))

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment			X			Legal/institutional support for BCCR to compile PPI is weak. Problems in obtaining revenue data from tax authority.
0.2 Resources			X			
0.3 Relevance		X				Few resources assigned to compiling PPI.
0.4 Other quality management			X			
No comprehensive program to monitor quality of current PPI.						
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions			X			PPI not compiled by both product and economic activity. Export goods not covered in PPI.
2.2 Scope			X			
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data			X			No regular comprehensive industrial survey.
3.2 Assessment of source data		X				PPI weights based on 1997 data.
3.3 Statistical techniques			X			
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X				No regular revision schedule for the PPI.
4.2 Consistency		X				
4.3 Revision policy and practice				X		
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

IV. GOVERNMENT FINANCE STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The responsibility for collecting, processing, and reporting fiscal statistics is assigned to the Ministry of Finance (MOF) by Law 8131 (*Law of Public Budgets*) of October 16, 2001, and its implementing Decree 32988-H of January 31, 2006. The law governs the economic and financial administration of all entities that manage or are custodian of public funds, and it applies to all public sector entities. The social security fund, municipalities, public universities, and public banks are exempt from the provisions of the law, except that these institutions must comply with all budgetary principles and provide information to the MOF.

Law 8131 establishes the Financial Management System under the MOF. The system is composed of four sub-systems: Budget, Treasury, Public Credit, and Accounting. It also includes the Asset Management and Administrative Contracts System as a complementary sub-system. Article 79 states that one of the objectives of the Public Credit sub-system, under the MOF's Department of Public Credit (DCP), is to record adequately the public domestic and foreign debt. Article 91 states that one of the objectives of the Accounting sub-system, under the MOF's Department of National Accounting, is to record systematically all transactions that affect the economic-financial position of the public sector.

Law 8131 also establishes the Budgetary Authority to provide guidelines for budgetary policy and ensure their observance. Decree 32988-H establishes the Technical Secretariat of the Budgetary Authority (STAP), and in Article 20 includes among its functions the compilation of fiscal statistics for the public sector. However, with regard to dissemination, the law mandates the minister to make certain budgetary information available to parliament according to a specified timetable, but does not establish an obligation to disseminate statistics to the general public. Nevertheless, the Costa Rican Constitution and the Constitutional Court stipulate that all information from public sector entities is public, unless specifically classified as state secret.

Three areas of the MOF are directly involved in the compilation and dissemination of fiscal statistics: (1) the Fiscal Analysis and Monitoring Unit of the STAP, which compiles and disseminates statistics on the operations of the public sector and its subsectors; (2) the Department of National Accounting, which compiles the cash flow of the budgetary central government; and (3) the Registry and Control Unit of the Department of National Treasury, which compiles and disseminates statistics on public debt. The Department of Public Credit is in the process of being established as a separate department from the Department of National Treasury, and will take over all debt related functions.

The Central Bank of Costa Rica (BCCR) also prepares and disseminates, among others, fiscal statistics, under Article 14 of its *Organic Law*, which establishes that the institution

should publish monthly a statistical summary of the country's economic situation. The Statistics of Institutional Sectors Unit of the Economic Division prepares tables on the operations and debt of the budgetary central government and the public sector, using information from the MOF as the primary source.

Law 7839 of November 4, 1998 establishes the National Statistical System (SEN) to coordinate the entities responsible for compiling and disseminating national statistics. The SEN is composed of all public entities that compile statistics for public purposes. The law also establishes the National Institute of Statistics and Censuses (INEC) as the technical entity to guide national statistics and to coordinate the entities that belong to the SEN. At present, the role of INEC in the compilation of fiscal statistics is negligible.

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

There are automated systems in place to directly collect information on the operations of the budgetary central government and all other public sector entities under the Budgetary Authority. The information on the operations of universities and public banks is reported directly by these institutions, and on the operations of local governments by the General Comptroller's Office (CGR). There are also automated systems to collect information on domestic and foreign debt.

Executive Decree 34534 of May 6, 2008 establishes the Financial Management Coordination Committee. It is composed of senior officers from various areas of the MOF, and has among its functions to promote coordination among the various sub-systems. This committee meets monthly.

The CGR is required by Article 184 of the Constitution and Article 32 of its Organic Law to submit to parliament on May 1 of each year a report on developments in the government's finances. All public sector entities must provide budget outturns to the CGR. The CGR report contains a statistical supplement with information on fiscal statistics. The data sources for the MOF and the CGR are essentially the same, but differences in the presentation formats and in certain methodological aspects can make reconciling figures difficult.

Fiscal statistics are only reconciled with monetary statistics on an annual basis. As a result, there are inconsistencies between sub-annual fiscal and monetary statistics regarding bank financing data. More generally, fiscal statistics are not regularly reconciled with the statistics from other macroeconomic datasets (national accounts, balance of payments), except for external debt.

The BCCR's compilation of fiscal statistics represents to a certain extent a duplication of efforts and an unnecessary burden on respondents. The central bank's needs concerning fiscal statistics should be met by the STAP and the DCP.

Recommendations:

Reconcile fiscal statistics and monetary statistics on a monthly basis.

Reduce duplication of efforts and burden on respondents by better coordination between the STAP and DCP, and the BCCR.

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

Law 7839 in its Article 4 states that the information collected under the law shall be strictly confidential, except that the information provided by public entities is available to all citizens. The information collected shall be used only for statistical purposes, and shall be presented in aggregate form. Data providers have the right to obtain information about the confidentiality of the data and its purpose.

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

Law 8131 in its Article 57 states that all public sector entities are obligated to provide the economic and financial information requested by the MOF. The specific guidelines for reporting information are issued every year. Thus, Decree 34406-H of March 8, 2008, specifies the information that public entities must report to STAP and sets a timetable for its submission. For example, it establishes that cash flow data must be reported monthly 15 days after the end of the month, and also sets dates for reporting quarterly budget execution data.

0.2 Resources

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

Overall the number of staff is adequate to perform current tasks. However, additional staff may be needed to undertake new initiatives. The Fiscal Analysis and Monitoring Unit of the STAP has a coordinator and 5 analysts, all trained in the methodology of government finance statistics. Each individual has access to their own computer and the Internet. The other three units of the STAP have an average 10 staff. The Registry and Control Unit of the Department of National Treasury has a coordinator and five analysts, again each with access to their own computer and the Internet. Turnover of staff is a problem and is due to MOF salary levels below the levels in both other public sector entities and the private sector.

Training opportunities are minimal and are mostly related to courses offered and financed by international organizations. On the job training is provided to new staff that join a unit. A training program is being developed for staff of the Financial Management System, but is not yet operational. Physical facilities are adequate. Office buildings provide comfortable working facilities, and office furniture and equipment are generally adequate to perform the assigned tasks. Funding for compiling statistics is commensurate with the work programs.

Recommendation: Improve internal and external training opportunities for staff.

0.2.2 Measures to ensure efficient use of resources are implemented

The costs associated with the compilation of fiscal statistics are not estimated. Periodic reviews of staff performance are conducted, and efforts are made to improve efficiency through automation of procedures. The CGR conducts periodic performance reviews of public entities. Budgeting procedures are in place to help allocate resources effectively.

0.3 Relevance

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

There is no formal consultation process with users to assess the usefulness of the statistics compiled. However, the needs of major official users (ministries, departments) play a key role in determining the data compiled and disseminated. Fiscal statistics are a part of the budget process and are used by policy makers.

Recommendation: Establish a process of regular consultation with data users.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality

Senior officials are sensitive to the quality dimensions of statistics. This is reflected in Costa Rica's subscription to the Special Data Dissemination Standards (SDDS). As a result of the subscription, statistics for various sectors are made available to the public on a regular pre-announced basis, metadata are available, and contact points to request information are identified.

The importance attached to data quality is also reflected in the commitment of resources to automate various data collection and processing tasks, and on the use of databases to handle information.

Costa Rica is participating in a government finance statistics (GFS) harmonization project for Central America, Dominican Republic, and Panama. This project aims to harmonize GFS in the region based on the framework of the *Government Finance Statistics Manual 2001* (GFSM 2001).

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

No formal processes are in place to monitor the quality of the statistics compiled and disseminated. However, there are continuous efforts to improve their overall quality, with emphasis on their internal consistency. Furthermore, the automated processes introduced incorporate a variety of checks, and analysts verify the accuracy of the data collected.

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

No formal processes are in place to deal with quality issues in the statistical program. However, in the discussion of the budget for future years the needs of the statistical programs are taken into consideration. The need for automation has been addressed as indicated above by allocating increased resources to that effect. The need for more and better computer equipment has been met by a leasing contract with a private company. The need for training is to be addressed by introducing a program to train staff.

The commitment to meet the requirements of the SDDS has led to the allocation of resources for this purpose.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis

The compilation of fiscal statistics is supported by Law 8131 and its implementing decree, as well as Law 7839 and its implementing decree. Furthermore, there are informal safeguards ensuring professional independence because the MOF has a culture of political noninterference in technical matters.

Recruitment and promotion are based on professional competence and performance. Formal and on-the-job training in the methodology and compilation methods are provided. All analysts involved in the compilation of fiscal statistics have attended courses on the subject.

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

The selection of data sources is based exclusively on technical considerations. The decisions to disseminate data and the manner in which they are disseminated are based solely on statistical considerations.

The compilation of fiscal statistics generally follows the guidelines of *A Manual on Government Finance Statistics 1986 (GFSM 1986)*.

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

The compilers of fiscal statistics are empowered to provide specialized advice on technical aspects of the statistics, though not on policy aspects. The MOF monitors media coverage of its data through its Press Office. Senior officials make comments on erroneous interpretation or misuse of the 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 laws and regulations governing the collection and dissemination of fiscal statistics are available to the public in electronic form and free of charge at the Virtual Knowledge Center of the MOF. In addition, there are no restrictions on public access to national statistics and other information. The contacts for further information on the statistics are identified in the MOF's website.

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

No public officials outside the MOF have access to fiscal statistics prior to their release.

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

The MOF identifies its statistical products as its own on its website, and requests attribution when its statistics are used or reproduced.

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

Changes in methodology are communicated at the time the data are published. No advance notice is provided.

1.3 Ethical standards

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

Internal MOF regulations, dated July 1996, include a section on the ethical principles of public servants, among them the duty to be objective, i.e., the duty to issue objective judgments free of third-party influence. A strong culture of political non-interference helps promote high ethical standards.

2. Methodological soundness

2.1 Concepts and definitions

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

The concepts and definitions used in compiling and disseminating statistics on central government and general government operations generally follow the guidelines of the *GFSM 1986*. The statistics on central government debt are based on national concepts and definitions that can be reconciled with international guidelines.

A migration path to the *GFSM 2001* has been adopted in the context of the GFS harmonization project for Central America, Dominican Republic, and Panama. The finance ministers of these countries have agreed to harmonize their GFS based on the framework of the *GFSM 2001*. The IMF's Statistics Department is supporting this project, and has provided an expert that will provide technical assistance to these countries over the next 18 to 24 months. The first technical assistance mission to Costa Rica already took place.

Progress towards migration to the *GFSM 2001* is already significant. Bridge tables have been prepared between national classifications and *GFSM 2001* classifications, and data are in the process of being converted for a few years.

2.2 Scope

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

The institutional structure of Costa Rica's public sector is set out and explained below to facilitate understanding the current scope of GFS.

I. Central Government (1+2+3)

1. Budgetary central government

Parliament, ministries, presidency, judiciary, CGR, and other

2. Extrabudgetary units

- A. Autonomous entities
- B. Decentralized institutions

3. Social Security Funds

Caja Costarricense de Seguridad Social

II. Local Governments

III. General Government Sector (I+II)

IV. Non-financial Public Enterprises

V. Financial Public Institutions

VI. Public Sector (III+IV+V)

There are two levels of government in Costa Rica: central government and local governments. The central government is composed of the budgetary central government, and extrabudgetary units. The local governments include municipalities and other institutions with separate budgets. The authorities' "central government" is equivalent to the subsector denominated as budgetary central government in the *GFSM 2001*. The national budget

covers only the budgetary central government; all other institutions have their budget approved by the CGR.

As detailed below, sub-annual (monthly) fiscal statistics are only compiled and disseminated for budgetary central government, while annual statistics are compiled and disseminated for the entire public sector and its subsectors.

The MOF through STAP disseminates monthly on its website a cash flow statement for budgetary central government prepared by the Department of National Accounting. A limited breakdown of revenue, expenditures, and financing is provided. Tables are provided with data for five years for the latest month and for the year to date. These are the only data disseminated monthly for government operations, and are used to meet the SDDS requirements.

In addition, a detailed table of revenues and expenditures on a “recognized” basis is prepared monthly for budgetary central government. No figures for financing are included. The main differences between the cash basis and the “recognized” basis are that the latter includes some non-cash transactions in revenues, and records some expenses when they accrue and not when they are paid. These data are not published. Furthermore, unconsolidated statistics are compiled monthly for a sample of institutions, which are called “reduced” nonfinancial public sector. These statistics are only published on an annual basis.

STAP compiles and disseminates on an annual basis the “Consolidation of Revenues, Expenditures, and Financing of the Public Sector.” The statistics are presented on an institutional, functional and sectoral basis. Detailed figures are provided for budgetary central government, extrabudgetary units, nonfinancial public institutions, financial public institutions, and public sector. No separate data are provided for social security funds (included in extrabudgetary units), central government, or general government. Statistics for these subsectors are only reported for publication in the IMF’s *GFS Yearbook*.

There is also an annual cash flow statement, with a different presentation from the monthly cash flow statement. The latter is called “table of revenues, expenditures, and financing” by the Department of National Accounting.

The MOF through its DPC also disseminates monthly on its website a set of nine debt tables, called SDDS tables. Several other debt tables for the budgetary central government and public sector are also disseminated monthly on the website. These tables provide detailed information on debt. In addition, a “Profile of the Debt” is prepared monthly for internal use, which uses graphs and charts to analyze the debt. This document is not disseminated to the general public, but is made available upon request to certain users.

A major deviation from international guidelines concerns the criterion used to classify domestic and foreign accounts. The place of issue (Costa Rica or abroad) criterion is followed, instead of the internationally recommended residency criterion. Statistics are final when first published.

The BCCR disseminates on its website tables on government operations and debt, based mainly on MOF data. One group of tables forms part of the BCCR’s Data Dissemination

System and others are included in its monthly *Coyuntura Report*. The first group includes the monthly cash flow statement prepared by the Department of National Accounting, in a slightly modified presentation, annual tables on the operations of the public sector, and tables on budgetary central government and central bank domestic debt.

The monthly report includes a table for aggregate revenues, expenditures, and results for the “reduced” public sector. Included in the “reduced” sample are the budgetary central government, the central bank, and six large institutions that report data directly to the BCCR. Other tables included in the report present detailed data for budgetary central government and for public sector debt.

Recommendations:

Disseminate on a monthly basis the budgetary central government revenues and expenditures table on a “recognized” basis. Include financing data on the table.

Disseminate on a monthly basis the revenues, expenditure, and financing table for the MOF’s “reduced” nonfinancial public sector. When dissemination begins, discontinue publishing the BCCR’s table for the “reduced” public sector.

Introduce the residency criterion for the classification of debt as domestic or foreign. The place of issue criterion can continue to be compiled, as needed, to provide supplementary information.¹

2.3 Classification/sectorization

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

The sectorization of fiscal statistics generally follows international guidelines, although separate statistics for central government, social security funds, and general government are not provided. However, the information is available to compile these statistics. There is an official definition of the public sector and its subsectors, which allows all data producing agencies to sectorize the public sector in a uniform manner.

Revenues, expenditures, and financing are generally classified following international guidelines. Debt follows a national classification, which is a mixture of classification by type of instrument and by holder. A functional classification of expenditure is only available annually.

¹ See the *Handbook on Securities Statistics* (<http://www.imf.org/external/np/sta/wgsd/index.htm>).

Recommendations:

Compile separate monthly and annual statistics for social security funds, central government, and general government.

Classify financing and debt according to the guidelines of the GFSM 1986.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

Flows are valued on a cash basis for monthly statistics. Flows are valued on a “recognized” basis for budgetary central government on an annual basis, and on a cash basis for the other subsectors. Gross debt is valued at face value, except for zero coupon bonds that are valued at issue price. Flows denominated in foreign currency are converted to national currency using the average selling rate on the date of recording, while stocks are converted using the average selling rate at the end of the period.

Recommendation: Compile all annual statistics both on a strict cash basis and on a non-cash (accrual) basis.

2.4.2 Recording is done on an accrual basis

Transactions are recorded as close as possible to the time of payment.

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

Most transactions are shown on a gross basis, except for financing transactions and corrective transactions. Revenues exclude certain items that are netted out, mainly related to income tax and social contributions.

3. Accuracy and reliability

3.1 Source data

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

The data sources for compiling fiscal statistics come primarily from administrative systems for monitoring budget execution that encompass all public sector entities under the Budgetary Authority. Data for municipalities come from the CGR, and data for universities and banks are reported directly to STAP by these institutions. Thus, comprehensive source data are available for general government and its subsectors.

The main source of information for the “recognized” monthly and annual budgetary central government statistics is the Integrated Financial Administration System (SIGAF), where

revenues and expenditures are recorded on real time. Financing is included separately into the system. All other institutions under the Budgetary Authority have to enter their cash flow information monthly into the Data Consolidation System (SICCNET). Annual data on municipalities are provided by the CGR based on their budgetary outturns, while annual revenue and expenditure data on universities and banks are provided directly by these institutions, also based on their budget outturns. No financing data are available for municipalities, universities, and banks.

The main sources for debt are the SINPE, which includes a module for domestic debt, and the external debt management system (SIGADE). Domestic debt information is reported monthly by the BCCR to the DCP; the other public institutions report information every six months. Foreign debt is reported daily by all public institutions.

The forms used to enter data into the information system have been field tested and are reviewed periodically. The GFS codes are not embedded in the chart of accounts.

Recommendation: In the context of the GFS harmonization project, embed in the chart of accounts the GFS codes for the GFSM 2001.

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

A uniform chart of accounts for all public sector institutions was introduced in 2006. The items on the chart of accounts can be easily aligned with GFS classifications. The definitions, scope, sectorization, classifications, time of recording, and valuation of flows and stocks generally follow international guidelines. The available information allows for consolidation of the various levels of government.

3.1.3 Source data are timely

Data on budgetary central government operations are available on real time through SIGAF. Monthly data for all other institutions under the Budgetary Authority must be entered into SICCNET by the 15th of the following month, as established by an MOF decree. Annual data must also be reported by the set dates. Data on budgetary central government debt are available by the 21st of each month. As a result, source data are timely.

3.2 Assessment of source data

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

Automated procedures are used to facilitate the monitoring of the accuracy of source data. The various information systems have built-in checks, and analysts also assess the data. Inconsistencies and out-of-trend data are investigated. Source data are reconciled across different sources, although reconciliation of financing data is only done on an annual basis.

The financial statements of all public sector institutions, except the budgetary central government, must be audited by an external auditor.

3.3 Statistical techniques

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

Compilation of fiscal statistics is based on comprehensive source data. There is no need to estimate or impute missing data. Statistics are final when first published. Reporting dates allow sufficient time to ensure that complete and accurate information is reported. Compilation procedures are internally documented.

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

Consolidation is done following international guidelines and in accordance with *GFSM 2001* recommendations. The conversion of fiscal statistics from the *GFSM 1986* format to the *GFSM 2001* format for reporting data to STA is done using bridge tables between both classifications.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information, where applicable

Intermediate results are generally not available for fiscal statistics.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

Large fluctuations or discrepancies are investigated.

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

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

Recommendation: Reconcile data discrepancies between the MOF and the BCCR on a monthly basis.

3.5 Revision studies

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

As indicated above, fiscal statistics are considered final when first published. Thus, no studies of revisions can be or are conducted.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards

Statistics for general government operations are disseminated annually, statistics for central government operations are disseminated monthly, and statistics for central government debt are disseminated monthly. Thus, the periodicity of the statistics meets or exceeds the SDDS requirements, which are annual dissemination for general government operations, monthly dissemination for central government operations, and quarterly dissemination for central government debt.

4.1.2 Timeliness follows dissemination standards

Annual statistics for general government are disseminated within six months, monthly statistics are disseminated by the 20th of each month, and quarterly statistics for central government debt are disseminated by the 21st of each month. Thus, the timeliness of the statistics meets or exceeds the SDDS requirements, which are six months for general government operations, one month for central government operations, and one quarter for central government debt.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset

The deficit/surplus is consistent with financing only on an annual basis, except for municipalities, universities and banks, for which no financing data are available. No reconciliation is done on a sub-annual basis. Major aggregates equal the sum of their components. Expenditure by economic classification equals expenditure by functional classification (although the latter is only compiled annually). Domestic financing and foreign financing are consistent with changes in domestic and foreign debt, respectively; however, no reconciliation is done on a sub-annual basis. Transfers paid equal transfers received, and interest paid is equal in both expenditure by economic and functional classification.

Recommendation: Reconcile monthly the deficit/surplus and financing, both on a cash basis and on a “recognized.” Likewise, reconcile monthly financing and debt.

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

Discrepancies with respect to expected trends in the revenue and expenditure time series are explained by fiscal policy or economic events. To date there has not been a need to adjust the time series for methodological changes.

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

Fiscal statistics are in principle consistent with related national accounts aggregates, as both use the same sources of information. However, no reconciliation is undertaken. Fiscal statistics are not consistent with balance of payments statistics, as the latter use the residency criterion to classify domestic and foreign debt. Fiscal statistics are not reconciled with monetary statistics.

The official definition of public sector and its subsectors, issued by the MOF under Article 37 of Law 8131, must be followed by all data producing agencies. This ensures in principle consistency in sectorization among these agencies.

Recommendation: Reconcile fiscal statistics on a monthly basis with the monetary statistics and on a quarterly basis with the national accounts and balance of payments statistics.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule

Fiscal statistics are final when first published and hence there is no revision cycle. Detected errors are corrected. The correction is not communicated to users.

4.3.2 Preliminary and/or revised data are clearly identified

The statistics are final when released for the first time.

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

No revision studies can be or are undertaken.

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)

Revenues and expenditures are disseminated according to the standard components of the *GFSM 1986*, while financing and debt are not. Analysis of the statistics would be facilitated

by using charts and graphs. Commentary on monthly fiscal statistics is provided by the Minister at a press conference.

Recommendation: Use charts and graphs to further assist data users in monitoring and analyzing developments in government operations. Publish the “Profile of the Debt” prepared monthly by the DCP.

5.1.2 Dissemination media and format are adequate

Fiscal statistics are disseminated through the MOF and the BCCR websites. A hardcopy version of the cash flow statement is provided to the press, prior to the Minister’s press conference. The MOF also prepares in hardcopy an annual report called *Consolidation of Revenues, Expenditures and Financing of the Public Sector*, with commentary on fiscal developments and detailed data not disseminated on its website. The report is available to the public but has limited distribution. The CGR disseminates its *Annual Report* on its website. Access to the statistics on the MOF’s website could be made more user friendly.

5.1.3 Statistics are released on a preannounced schedule

The statistics that are part of the commitment under the SDDS are released according to a pre-announced schedule, while other statistics are not. These statistics without a pre-announced schedule are however disseminated on a regular basis.

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

The release of the fiscal statistics is announced at a press conference, and is made available to all interested parties simultaneously.

5.1.5 Statistics not routinely disseminated are made available upon request

Statistics not routinely disseminated are made available upon request, but this service is not publicized.

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 concepts, definitions, classifications, and other methodological information are only available on the SDDS website. There is a direct link on the MOF’s website to the SDDS website.

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

Only the metadata information on the SDDS website is available.

5.3 *Assistance to users*

5.3.1 *Contact points for each subject field are publicized*

Contact persons for each STAP unit are provided. Questions are addressed by telephone and e-mail. Contact persons for the DCP are also provided and questions from users are addressed. Informal monitoring of the assistance to users is conducted.

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

There are no catalogues of publication as most data are available only electronically. A list of tables is provided on the MOF and BCCR websites. Statistical services are provided to users free of charge.

Table 4. Costa Rica: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics
(Compiling Agency: Ministry of Finance)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment			X			Coordination between the MOF and the BCCR could be improved.
0.2 Resources			X			Training opportunities for staff should be increased.
0.3 Relevance			X			No process of regular consultation with data users exists.
0.4 Other quality management			X			No formal processes are in place to monitor data quality.
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions			X			Government debt statistics follow national concepts and definitions.
2.2 Scope				X		Limited statistics on government operations are available on a monthly basis. Residency criterion not followed to classify debt.
2.3 Classification/sectorization			X			No separate statistics are available for social security funds, central government, and general government.
2.4 Basis for recording			X			Annual budgetary central government statistics not on a strict cash basis. Some revenue transactions are netted out.
3. Accuracy and reliability						
3.1 Source data			X			No comprehensive source data for financing.
3.2 Assessment of source data		X				Fiscal statistics are not regularly reconciled among national compilers for particular items.
3.3 Statistical techniques		X				
3.4 Assessment and validation of intermediate data and statistical outputs			X			
3.5 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X				The deficit/surplus and financing, and financing and debt, are not reconciled monthly. Fiscal statistics are not reconciled with other macroeconomic datasets.
4.2 Consistency				X		
4.3 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility			X			The use of graphs and charts would facilitate understanding statistical developments. Access to statistics in the MOF's website should be more user friendly.
5.2 Metadata accessibility			X			Only the metadata on the SDDS website are available.
5.3 Assistance to users		X				

V. MONETARY STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

Article 14(d) of the Law 7558 (*Organic Law of the Central Bank of Costa Rica*) states that the Central Bank of Costa Rica (BCCR) “shall publish, on a monthly basis, a statistical summary of the economic situation of the country, including, at a minimum, information on production, prices, monetary aggregates, credit, exports, imports, and gross and net international reserves. The Bank shall establish and publish the methodology that it will use to compile this statistical summary, as well as any changes to such methodology.”

Article 16(b) of the same law establishes that the BCCR shall publish, during the first three months of the year, “a summary of the main economic, monetary, financial, and banking events of the previous year.”

Chapter IV of the *Organic Law of the Central Bank* deals with the creation, organization, and functions of the General Superintendency of Financial Entities (SUGEF), as a decentralized entity attached to the BCCR. The main function of the SUGEF is “...to keep watch over the stability, solvency, and efficient functioning of the national financial system,” to which end it can “...prescribe the general rules needed for the establishment of sound banking practices..., which will be binding to the supervised entities” (Article 119 of the Law 7558). The obligation of other depository corporations (ODCs) to report data to the SUGEF is established by Article 17 of the Law 1644 (*Organic Law of the National Banking System*), which states that “... banks are required to report [to the SUGEF] ... all balance sheets, financial statements, and statistical tables ...” that the SUGEF requires from them, within the deadline and in the terms and conditions established by the SUGEF.

Financial entities submit to the SUGEF, on a monthly basis, their balance sheets plus several supplementary reports for supervisory and statistical purposes. They also submit to the Monetary and Financial Statistics Section (AEMF) of the BCCR, in a hard copy, supplementary data on interbank positions, and sectoral distribution of loans, investments, and deposit liabilities.

The BCCR is the sole institution that compiles monetary and financial statistics in Costa Rica. The *General Organization and Functions Manual* of the BCCR endows the AEMF of the Macroeconomic Statistics Department (DEM) of its Economic Division (DE) with the responsibility to compile and analyze macroeconomic statistics of the financial corporations sector, following international methodological standards.

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

Coordination is adequate between the SUGEF and the different units of the BCCR, including the AEMF. In January 2001, an agreement was subscribed to guarantee the flow of information from the SUGEF and the General Superintendency of Securities (SUGEVAL) to the BCCR. Additionally, the SUGEF authorized the ODCs to report directly to the BCCR supplementary data needed for the compilation of monetary statistics. Staff of the AEMF meet with staff of the SUGEF when needed; and if the issue deserves it, agreements are endorsed by the higher authorities of the institutions. Before introducing changes to the chart of accounts of the ODCs, the SUGEF consults with the BCCR, to take into account its data requirements. This is in compliance with Article 131(l) of the *Organic Law of the Central Bank*. The SUGEF transmits electronically to the AEMF the monthly balance sheets of its supervised institutions. Direct access of the AEMF to the SUGEF's database has been agreed, but the arrangement is not yet implemented because the BCCR has not specified its information requirements. It is foreseen that this direct access will be operational in the near future, within the framework of the recently launched automation project at the BCCR.

Within the BCCR, there are mechanisms in place to guarantee the flow of information between the Accounting Department (DCO) and the AEMF. Staff of the DEM are given direct access to the financial and accounting system of the BCCR, which contains historical and current information on all accounting records of the BCCR, including daily data with a one-day lag. The AEMF has access to the database of the Financial Services Division (DSF), which contains historical and current information on characteristics and evolution of the domestic debt of the BCCR and the central government.

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

Confidentiality of the reported data is guaranteed by Articles 14(f) and 132 of the Law 7558, and by Article 171(i) of the Law 7732 (*Regulatory Law of the Securities Market*). Article 14(f) indicates that "... the Bank [BCCR] is forced to keep the confidentiality of the individual information reported by physical and legal persons." Article 132 prohibits the Superintendent of the SUGEF, any member of the Board, its staff, or any person providing services to the SUGEF to "... release information related with the documents, reports, or operations of the supervised entities." Finally, Article 171(i) covers the exchange of information between different Superintendencies, indicating that the "... Superintendency that receives information ... shall maintain the requirements of confidentiality that apply to the original recipient of such information." Exceptions are in place, as provided in Article 132. They include some special cases, as well as information requested by judiciary authority, information requested by the Executive Board of the BCCR to adequately perform its duties, or information needed to combat money laundering.

The *Guideline on Impartiality, Objectivity, and Integrity of the Staff of the Central Bank of Costa Rica* (Article 5) indicates that, "... besides the legal dispositions that compel public servants to preserve the confidentiality of the issues under their knowledge ... staff must be discreet with regard to all facts and information they become aware of when performing their

functions ...” This requirement extends up to one year after the staff has terminated their relation with the BCCR, and in some special cases until the facts lose their relevance. Sanctions are foreseen in case of breach of this data confidentiality in Article 132 of Law 7558, applying Article 203 of the Penal Code. Breach of confidentiality by staff of the SUGEF is considered a severe violation for employment purposes.

ODCs transmit their data to the SUGEF through an interface of the *System of Capture, Verification, and Data Uploading* (SICVECA), sending via Internet an encrypted file in XML format. This mechanism is only for data transmission, and no queries may be sent through it. The SUGEF’s database stores encrypted data, which can only be accessed by the administrator and authorized staff. Protection against external attacks is provided by a firewall and an intruder prevention system (IPS) that blocks for a week the user’s address when it detects an attack. Internally, the database is protected with standard Microsoft shields (SQL 2005), and by visual monitoring of staff attempts to gain unauthorized access to the data. The data protection system has improved significantly since 2006, and was assessed several times by external consultants. These assessments have been positive.

The SUGEF transmits the data to the AEMF via unsecured e-mail. However, these files contain nonconfidential data available on the SUGEF’s external website. The electronic transmission is mainly to alleviate the workload of the AEMF.

Monetary data are stored and processed at the BCCR in a database system capable of generating reports (MONET system). Access to this system is limited to staff of the DEM. The MONET system distinguishes users with different levels of access, some as read-only users and others with access to aggregated data only.

The BCCR aggregates disseminated data by groups and subgroups of financial intermediaries, avoiding the publication of individual data. If a group has only one institution, the data are published in a broader category. However, the SUGEF disseminates balance sheets, income statements, and financial soundness indicators for each individual institution, all of which are considered public information, as is the practice in many countries.

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

The *Organic Law of the Central Bank* establishes that any financial institution engaged in financial intermediation will be supervised by the SUGEF, authorizing it to determine the general accounting rules to be followed by the financial intermediaries. Article 134 of the same law states that “... supervised entities must provide full collaboration to the Superintendency to facilitate its supervisory activities.” As already stated, Article 17 of the *Organic Law of the National Banking System* empowers the SUGEF to collect information from ODCs under the terms and conditions that the SUGEF decides.

Penalties for noncompliance are provided in Article 155 of the *Organic Law of the Central Bank*, which foresees five categories of infringements, three of them related to the

information reported to the SUGEF. Sanctions range from the prohibition to participate in the exchange market for a period of 90 days, an increase of the required reserves to 100 percent of the institution's liabilities, prohibition to extend loans, to fines of one percent of the institution's capital and reserves. If ODCs cannot comply with the reporting requirements, they must ask SUGEF for a waiver. In case of noncompliance, the first step taken by the SUGEF is to send a warning note, before proceeding to penalize the institution. In the recent past, there were no cases of noncompliance, although sometimes the reporting institutions need to revise data already submitted to the SUGEF.

The SUGEF has published a handbook (available on its website) with detailed instructions on the information to be reported by ODCs including, among others, type of information to be submitted, deadlines, and means of transmission. The webpage of the SUGEF also contains a window for the SICVECA, with detailed information on how to access the system, the chart and manual of accounts, the XML files to be uploaded, deadlines, frequently asked questions, etc. For the data that ODCs report directly to the AEMF, the BCCR has distributed a *Manual for Preparing Monthly Reporting*, with a thorough description of the economic sectors and instruments, the tables that must be completed, and a comprehensive list of the institutional units constituting the central government, the nonfinancial public corporations, the financial public corporations, and the ODCs.

The SUGEF is in close contact with ODCs to assist them whenever there is a need for clarification. Staff of the AEMF also respond to queries sent by banks, either by phone or e-mail. The BCCR organizes occasional meetings with ODCs to discuss and inform them about issues on monetary statistics and data reporting.

0.2 Resources

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

Staff, facilities, and computing resources are adequate to perform the required tasks. Additional resources may be needed if the DE decides that the AEMF starts monitoring the soundness of the banking and financial system. At end-March 2009, the AEMF had nine staff, including the Unit chief, plus a vacant position. Four staff work full-time on the compilation and dissemination of monetary statistics. They are supplemented by two staff working on a part-time basis: one at 90 percent of her time, and the other one at 50 percent of his time. The other two employees are dedicated to other areas of work. All staff have completed a university education with background in economics, statistics, or accounting. Six of them have pursued post-graduate studies at national universities. They have nine to 29 years of service at the BCCR, with an average length of service of 15 years. All staff have attended the IMF monetary and financial statistics course, and most of them have also taken the IMF's financial programming course. They periodically participate in seminars and courses offered by the Latin American Monetary Studies Center (CEMLA), the Deutsche Bundesbank, and the Study Center Gerzensee of the Swiss National Bank. Staff have received training in other relevant areas, such as financial system stability, financial derivatives, and open market instruments.

The compensation policy of the BCCR, which also applies to staff of the SUGEF, determines that remunerations at the BCCR should be at least the median of similar positions in a sample of corporations with characteristics comparable to the BCCR. This policy has kept qualified staff at the BCCR, although departures of information technology staff has been noted in recent periods. The SUGEF experienced loss of personnel when it moved to a new building outside downtown San Jose in mid-2008. A factor negatively affecting the retention rate at the BCCR and the SUGEF is the ten vacation days per year given to staff—the minimum mandated by law—which compares unfavorably with benefits offered by the private sector.

Each staff at the AEMF has his/her own personal computer with enough speed, RAM, and hard-drive capacity. Computers are linked by a local network within the BCCR, and have access to Internet, Intranet, e-mail, and the BCCR's MONET database. The software utilized for compiling monetary statistics is MS Office 2007 and the MONET database. Hardware is replaced every three to four years. The existing infrastructure provides for good working conditions at the BCCR.

0.2.2 Measures to ensure efficient use of resources are implemented

The AEMF has access to the database of the DCO and to the repository of the BCCR's issued securities. The processes for data transmission from the ODCs to the SUGEF is fully automated, as well as the transmission of data from the SUGEF to the AEMF. However, the AEMF still receives in hard copy supplementary data from the ODCs, which are inputted manually for the compilation of the ODC survey, creating inefficiencies in the compilation process.

The MONET database system is outdated and inflexible. The generation of reports through MONET is a rigid, slow, and user unfriendly process. Due to the weaknesses of the database, several procedures for data generation are done in Excel, instead of with a more powerful database software. Additionally, many validation processes of source data are conducted manually.

The automation project recently launched by the BCCR is expected to eliminate these inefficiencies, granting the AEMF direct access to the SUGEF's database, and allowing electronic transmission of data from the ODCs to the AEMF. Once this project is implemented, the entire compilation process of monetary statistics will be fully automated.

Recommendation: The BCCR should give priority to the on-going automation process, in particular the phases that will provide the AEMF with access to the SUGEF's database, allow electronic data transmission from the ODCs to the AEMF, and permit the migration to a more powerful and flexible database for monetary statistics with automated data validation.

Data stored by the SUGEF is automatically replicated on-line and backed-up at an outside location in downtown San Jose, ensuring that no data would be lost in case of fire or natural disaster. At the BCCR, the Technology Services Division (DST) creates daily back-ups of all

information stored in its network. The DST keeps copies of all the records in another building outside downtown San Jose. The policy for data maintenance and destruction must comply with the Law 7202 (*Law of the National System of Archives*), which establishes the conditions under which different kind of documents and data must be preserved or may be destroyed. Data prior to September 1998 was destroyed by the SUGEF, but due to the expansion in storage capacity, all data are now preserved.

The human resources policy of the BCCR promotes professionalism. New and vacant positions are filled through a competitive process carried by an independent unit of the BCCR. This unit selects the candidates according to the profile requested by the interested departments through technical and suitability tests. Most employees are hired on a permanent basis. Staff performance is evaluated on a semi-annual basis by their immediate supervisor. This evaluation is considered in the determination of the salary increase.

Efficiencies in the compilation and dissemination of monetary statistics are achieved at the BCCR through staff training, regular review of existing procedures, assessment of statistical products through consultations with internal and external clients, and the implementation of automation processes. In recent years, the BCCR has received technical assistance from the IMF's Statistics Department (STA), which also helped improve efficiency in the use of resources.

A software commission at the BCCR continuously assesses the needs for statistical and econometric programs, and establishes BCCR-wide priorities. The 2005–2009 Master Strategic Plan (PEM) of the BCCR focuses on procedures to optimize the BCCR's processes, improve the quality of its products, and evaluate the overall institution's performance. A fully funded automation project throughout the different units of the BCCR, including the DEM and the AEMF, is being implemented. The automation project will be fully launched in May 2009, and it is expected that the tasks affecting the AEMF will be completed within twelve months.

0.3 *Relevance*

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

In December 2003, the Institutional Services Department (DSI) of the BCCR conducted a satisfaction survey of internal and external users to evaluate the quality of the services provided by the BCCR, including its statistical products. Several dimensions were evaluated, such as response time, service to clients, professionalism, organization, etc. At the time of this ROSC mission, a similar survey was underway at the BCCR, this time conducted by the Planning and Management Control Department (DPCG).

The BCCR also seeks feedback on its monetary statistics products through (1) contacts with the Costa Rican Banking Association (ABC); (2) a site on its webpage where the general public can send comments; and (3) analyzing the requests received for nonpublished data, which eventually led to the introduction of new data series.

Staff of the BCCR periodically participate in statistical meetings and seminars organized by both international and domestic organizations, in particular the Central American Monetary Council (CMCA). A project worth noting is the recently completed harmonization of monetary statistics for Central American countries, Panama, and the Dominican Republic, which was implemented with support from the IMF and coordinated by the CMCA.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality

Monetary and financial statistics follow international quality standards. The BCCR has a strategic plan for the development and improvement of macroeconomic statistics, a main output of which is the automation project. The AEMF has recently produced a business vision for the monetary and financial statistics, highlighting the needs and expectations in relation to the management of these statistics. The document identifies the problems faced by the AEMF, as well as the solutions proposed to fulfill its objectives.

Staff of the BCCR participate regularly in training programs, which are not only limited to quality dimensions of the statistical products, but also encompass other aspects of their work.

Different initiatives within the BCCR evaluate the accuracy, coverage, and timeliness of the monetary statistics and other macroeconomic statistics published on the BCCR's website. The authorities of the BCCR are aware of the different dimensions of data quality, and the possible trade-off between timeliness and accuracy.

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

The on-going satisfaction survey among internal and external users will provide inputs to improve the statistical program. Also, the BCCR has requested continuous technical assistance from the IMF to improve its monetary statistics, and has maintained a good track record of implementing the recommendations. Indeed, a program is in place to fully comply with the methodology of the *Monetary and Financial Statistics Manual (MFSM)*.

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

The BCCR has undertaken efforts to enhance the quality of monetary data, more precisely by participating in the harmonization project of monetary statistics for Central American countries, Panama, and the Dominican Republic. Improvement needs are identified through contacts with other units working on macroeconomic statistics and other institutions responsible for the production of source data (e.g., SUGEF, SUGEVAL). The AEMF has identified the need to shift from the current Excel based worksheets to a more powerful database system.

Comments from users received through the questionnaire posted on the BCCR's website are reviewed and relevant ones incorporated in the work program.

The BCCR aims at timely dissemination of accurate data, but when a trade-off arises, it publishes provisional data, indicating such with a footnote

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis

Article 1 of the *Organic Law of the Central Bank* states that the BCCR is an autonomous institution. The Bank acts independently from other state authorities when implementing its responsibilities, including the compilation and dissemination of monetary statistics. The President of the BCCR is appointed by the President of the Republic for a term that coincides with the term of office of the President of the Republic.

The independence and impartiality of staff of the BCCR when performing their duties are guaranteed by the Law 6227 (*General Law of the Public Administration*), which indicates, among others, that public servants must not follow received instructions when these are clearly extraneous to their competence, or obviously arbitrary (Article 108) and that the public interest should prevail over the interest of the public administration (Article 113). These dispositions are reinforced by the BCCR's *Autonomous Guideline of Services*, in particular in Article 116, where staff of the BCCR are required to perform their duties in a diligent way, employ all the required efforts, concentration, care, and dedication. The internal audit system of the BCCR safeguards the technical independence of the tasks carried out by the institution. Monetary data compilers in the AEMF apply strict technical criteria, following the methodology of the *MFSM*. There have been no cases of interference from other government agencies or the higher authorities of the BCCR in the process of compiling the monetary statistics.

Management of the BCCR promotes a culture of professionalism and supports staff participation in training courses, pursuit of post-graduate studies, and attendance in international meetings (especially with counterparts from other Central American countries). Staff of the BCCR are encouraged to participate in the annual network of central banks' researchers. The remuneration policy promotes research, and incentives through salary increases are given to staff that have published books or articles in technical journals, or has lectured in specialized courses. Staff of the BCCR have contributed articles to professional magazines, such as *Monetaria* and publications of the University of Costa Rica and the National University.

Recruitment and promotions at the BCCR are based on skills and expertise in the relevant areas. Hiring is done following a competitive process, with openings posted on its internal and external websites, indicating the remuneration and the stage of the recruitment process.

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

Balance sheets of the BCCR and the ODCs are the basic sources for the compilation of monetary data. All ODCs follow a standard chart of accounts approved by the SUGEF. Accounting practices comply with international standards. ODCs submit additional, sectorized data directly to the AEMF for purposes of monetary statistics. Other financial statistics not based on accounting records, such as interest rates, are produced using reports by all commercial banks and finance companies, and presented by instrument and maturity. For the classification of financial instruments and sectorization of the accounts, the AEMF broadly follows the methodology of the *MFSM*.

The dissemination of monetary data follows established procedures and strictly complies with an advance release calendar posted on the BCCR's website. The periodicity and timing of data dissemination have never been hampered by pressures from other government agencies.

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

The BCCR publishes technical notes to explain relevant facts and compilation methodologies for the disseminated data to prevent erroneous interpretation and misuse of statistics. Additional guidelines on data interpretation are also provided upon request.

The BCCR does not have a press office, but has outsourced the preparation of a daily press summary to an external contractor. This firm assists the BCCR in preparing press conferences, and alerts it when news relevant to the BCCR's activities are published. In such occasions, the kind and level of response is decided by the Office of the BCCR's President.

1.2 Transparency

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

Costa Rica subscribes to the IMF's Special Data Dissemination Standard (SDDS). Its metadata on monetary statistics are accessible on the IMF's Dissemination Standards Bulletin Board (DSBB) and were last updated in June 2008. The BCCR's website provides a link to the Costa Rica page on the DSBB. On the BCCR's website, in the section "Monetario y Financiero" of "Indicadores Económicos," methodological notes are accessible for each dataset of monetary statistics.

Electronic versions of the relevant laws and regulations are available to the public in Spanish on the BCCR and the SUGEF websites, which also contain a detailed description of the work and responsibilities of their different departments.

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

Only the higher levels of the DE and the members of the BCCR's Board have access to some preliminary data for internal use and as part of the data review process within the BCCR. This access has never affected the release calendar of monetary data. No other governmental agency has access to the data before they are released to the public.

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

The BCCR's website indicates that this institution is the sole proprietor of its disseminated statistics. All data compiled by the BCCR are clearly identified as the BCCR's product. The BCCR's publications are identified by its name, logo, and insignia. When data of other producing agencies are published in the BCCR publications, the data producing agency is identified.

Monetary data produced by the BCCR may not be quoted in other publications without the written consent of the BCCR.

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

Technical notes attached to monetary data published on the BCCR's website inform users about major changes in methodology, source data, and statistical techniques. Important methodological changes are presented for public consultation before introducing them. For instance, the methodology for calculating the basic interest rate² was changed in 2008. The AEMF conducted a study and recommended the change in the methodology, which were then reviewed and revised at the upper levels of the DE, the President, and the Board of the BCCR. The new methodology was then sent for public consultation, mainly to the financial sector. The new methodology was finalized and disseminated only after considering comments received during a two-week consultation period.

1.3 Ethical standards

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

The BCCR's *Autonomous Guideline of Services* and *Guideline on Impartiality, Objectivity, and Probity of the Staff of the BCCR* clearly identify norms of conduct and the ethical standards for the staff. Relevant sections of the *Guideline of Services* are Articles 116, 117, and 53 *bis*, which mandate employees to perform their functions to the best of their ability, prohibit them from using their positions to obtain any personal advantage, and instruct the heads of departments to ensure that employees do not perform, on a permanent basis, tasks that are different from their assigned responsibilities. A whole chapter of the *Guideline of*

² A reference rate calculated by the BCCR, which is frequently used in private contracts and as a benchmark for bank loans.

Services is dedicated to the handling of harassment. Article 4 of the *Guideline on Impartiality* requires that staff of the BCCR should act honestly, especially when managing public resources. Article 5 deals with confidentiality issues, while Articles 6 and 7 pertain to conflicts of interest.

Both guidelines are available on the BCCR's Intranet and known by the employees, who consider them sufficient to handle ethical issues. Occasionally, management of the BCCR sends internal communications to remind staff of these norms. Past cases of violation of the ethics code were sanctioned, in some instances by the termination of employment.

2. Methodological soundness

2.1 Concepts and definitions

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

The methodological framework used by the BCCR to compile the depository corporations (DC) survey is broadly consistent with the guidelines of the *MFSM* and other international statistics standards, such as the *1993 System of National Accounts (1993 SNA)* and the *Balance of Payments Manual, 5th edition (BPM5)*. The DC survey is based on the balance sheets of the BCCR and the sectoral balance sheets of the public and private commercial banks, finance companies, housing associations, credit unions, and the Caja Ande.³

The main monetary aggregates compiled by the BCCR, which are calculated for the national banking system (consisting of the BCCR and commercial banks) and the financial sector (BCCR plus all ODCs) are:

- *Monetary base*: currency outside the BCCR, plus commercial banks' deposits with the central bank;
- *Circulation means*: currency in the hands of the public, plus current account deposits in national currency with commercial banks;
- *Quasi-money*: all deposits in foreign currency of the public with ODCs, plus all other deposits in national currency (savings and time deposits, cashier's checks, etc.), plus other liabilities in national and foreign currency of the ODC sector (e.g., traveler cheques, deposits to pay credit cards, etc.); and
- *Total liquidity*: circulation means plus quasi-money.

³ The BCCR disseminates also a narrow survey of the banking sector, comprising only the accounts of the central bank and commercial banks.

The AEMF also compiles another measure of narrow money—currency in the hands of the public, plus current account and sight deposits in national and foreign currency, plus overdue fixed term deposits in national and foreign currency, plus cashier's and certified cheques in national and foreign currency. This definition of narrow money has not been published yet.

Costa Rica was among the first countries that adopted the standardized report forms (SRFs) for data reporting to the IMF, which classify and sectorize instruments according to the *MFSM* methodology. Costa Rica participated in the harmonization project for monetary statistics for the Central American countries, Panama, and the Dominican Republic, which by end-2008 produced a set of consistent monetary data for these countries using the SRFs.

2.2 *Scope*

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

At end-April 2009, Costa Rica's depository corporations sector comprised the BCCR, three state-owned commercial banks, one bank created through a special law (Banco Popular), eleven private commercial banks, six finance companies, 32 credit unions, two housing and loans associations, the Caja Ande, and 23 short-term investment funds. There are no banks in liquidation. The data cover the headquarters and branches of these depository corporations. All ODCs are included in the ODC survey, except the short-term investment funds, which issue liabilities that are close substitutes for deposits and should be included in the national definition of broad money.

A distinction should be made between the data sent by the BCCR to the IMF for publication in *International Financial Statistics (IFS)* and to the CMCA for the harmonization project,⁴ and the data disseminated directly by the BCCR. The *IFS* and CMCA data comply with the coverage recommended by the *MFSM*, except for the exclusion of short-term investment funds, which account for approximately five percent of total assets and liabilities of the ODC subsector. The data published by the BCCR are presented at two levels: (1) the banking system (BCCR and commercial banks) and (2) the financial system (BCCR, commercial banks, and other nonbank deposit-taking corporations). The second level is equivalent to the *MFSM*'s definition of the ODC sector.

Recommendation: The AEMF should expand the coverage of the ODC survey to include also the accounts of short-term investment funds.

Going beyond the scope of monetary statistics, Costa Rica should start compiling an other financial corporations (OFCs) survey covering pension funds, long-term investment funds, insurance corporations, and the Housing Mortgage Bank (BHV). Data for these financial corporations are already available directly to the BCCR or through the SUGEVAL and the Superintendency of Pensions (SUPEN).

⁴ The data submitted to the CMCA are also available on the BCCR's website.

Recommendation: The BCCR's should start compiling an OFCs survey, with data for pension funds, long-term investment funds, insurance corporations, and the BHV.

2.3 Classification/sectorization

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

Sectorization of monetary statistics broadly follows the recommendations of the *MFSM* and the *BPM5*, although some shortcomings were detected. Foreign positions are distinguished from domestic positions on the basis of residency. The chart of accounts used by ODCs allows for a proper identification of accounts of nonresidents. However, this chart of account does not permit a proper sectorization of claims on and liabilities to domestic sectors, and additional data must be provided by the ODCs to the BCCR. The *Manual for Preparing Monthly Reporting* explains the concept of residency based on the center of economic interest and provides a definition of the different resident economic sectors and subsectors. The *Manual* also includes a comprehensive list of the institutional units of the central government, the public nonfinancial corporations sector, and the financial sector.

One sectorization problem is the exclusion of the social security system from the central government accounts, distorting the monetary aggregates. This shortcoming affects both, the data published directly by the BCCR and the data compiled using the SRFs. Although the AEMF is aware of the problem, it could not solve it due to lack of disaggregated data. The monetary surveys published by the BCCR contain a subsector “rest of the public sector,” which includes local government, public nonfinancial corporations, the social security system, and also accounts of public financial corporations, which should be sectorized as OFCs. The “private sector” of these surveys do not distinguish between nonfinancial corporations and households and nonprofit institutions serving households (NPISHs). Data compiled using the SRFs correctly classify public financial corporations in the OFC sector, but only loans are broken down between private nonfinancial corporations and other resident sectors, while all deposits are recorded as deposits of households and NPISHs.

Recommendation: The accounts of the social security system should be classified as part of the central government. The private sector accounts should be split into nonfinancial corporations and other resident sectors (households and NPISHs).

Classification of financial instruments broadly follows the recommendations of the *MFSM*. Instruments are classified by type, liquidity, and currency of denomination (national and foreign). Repurchase agreements are classified as collateralized loans, while financial derivatives are properly recorded in terms of net value. However, advances on insurance premiums are recorded as *Other assets* rather than as *Insurance technical reserves*. Accrued interest is not classified together with the underlying instrument in the surveys published by the BCCR, but as *Other items net*. For the compilation of the SRFs, accrued interest is proportionally allocated to the different sectors on the basis of the balances of the instruments. Valuation adjustments are transferred to profits and loss accounts twice a year. The proportion of *Other assets* and *Other liabilities* in the total of the balance sheet of the

BCCR is 17 and 23 percent, respectively; and in the aggregated balance sheet of ODCs, around 6 percent for both items.

The DC survey is presented using the following categories:

- Net foreign reserves;
- Domestic credit (net claims on central government, claims on the rest of the public sector, claims on the private nonfinancial sector, and claims on private nonbank financial corporations);
- Other claims on nonresidents;
- Other items net (other financial assets, nonfinancial assets, other accounts receivable/payable, other liabilities, and capital accounts);
- Total liquidity (quasi-money plus M1);
- Open market operations; and
- Long-term liabilities to nonresidents.

In this presentation, all securities (with short- and long-term maturities) issued by ODCs are included in quasi-money, although only short-term securities should be part of the national definition of money. However, securities issued by the BCCR that should be included in broad money (short-term Monetary Stabilization Bonds, or BEM) are excluded from *Total liquidity* and included as *Open market operations*. For the SRFs, short- and long-term BEM are included in broad money, thus resulting in an overestimation of broad money. Only short-term securities issued by ODCs are included in broad money in the SRFs, which is correct.

Recommendation: The national definition of money (“Total liquidity” in the surveys disseminated by the BCCR) should include short-term BEM and short-term securities issued by ODCs, and exclude all long-term securities.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

Accounting rules at the BCCR and at ODCs comply with International Financial Reporting Standards (IFRS). Market prices are used to value transactions and stocks. Accounts in foreign currency of the BCCR are revalued daily using the reference buying exchange rate published by the BCCR, which is based on the market exchange rate. Accounts in foreign currency of the ODCs are revalued at the end of the month using the reference buying exchange rate. BCCR’s positions with the IMF are revalued daily using the U.S. dollar/SDR rate of the IMF. Holdings of monetary gold are revalued by the BCCR once a month based on the international market price.

Securities held for trading are recorded at market prices, which is consistent with the *MFSM* methodology. Securities held to maturity are recorded at amortized cost (issuing price plus accrued interest). Securities issued by the BCCR and ODCs are recorded at amortized cost. For the compilation of the DC survey, the AEMF consolidates the securities issued by ODCs and held by other ODCs. Because the valuation for securities held (market value) and issued (amortized cost) may differ, the discrepancy is allocated to securities issued by ODCs and held by the private sector.

2.4.2 *Recording is done on an accrual basis*

The accounts of the BCCR and those of the ODCs are recorded on an accrual basis. Accrued interest receivable and payable are proportionally distributed by sectors when compiling the SRFs, but presented as *Other items net* in the surveys published by the BCCR. The BCCR records interest accrued on nonperforming loans as income, but twice a year it creates the corresponding provisions for this interest. ODCs accrue interest on nonperforming loans as long as they are not overdue more than 180 days, but constitute the corresponding provision.

Transactions are recorded at transaction date, i.e., when there is change of ownership. If there is a discrepancy between the values at date of transaction and at date of settlement, it is recorded in the DC survey under *Other items net*.

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

Assets and liabilities of the BCCR and ODCs are presented on a gross basis (i.e., no netting of claims of a particular transactor against the liabilities to that transactor or group of transactors). Accounts in overdraft are recorded and reported as loans to the corresponding sector.

In the financial statements (source data), loans are recorded on a gross basis at nominal values while provisions for loan losses are recorded as a negative asset item that is netted from total loans. When compiling the monetary statistics, the AEMF brings the provisions for loan losses to the liability side under *Other liabilities*, thus presenting loans on a gross basis at nominal value.

When producing the central bank survey, the AEMF presents claims on nonresidents, the central government, and other (financial and nonfinancial) units of the public sector on a net basis. Additionally, it presents separately claims on and liabilities to commercial banks. Claims on and liabilities to nonbank deposit-taking corporations are grouped together with other private financial corporations. In the ODC survey, the AEMF consolidates the intrasectoral accounts of the ODCs in *Other items net*. The DC survey consolidates the accounts of the BCCR with the accounts of ODCs, also in *Other items net*.

3. Accuracy and reliability

3.1 Source data

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

The SUGEF keeps an updated register of the financial institutions under its supervision. Data sources for the DC survey are the balance sheets of the BCCR and of the ODCs, plus supplementary information needed for sectorization and reported on hard copy by the ODCs to the AEMF. The AEMF has on-line access to the BCCR's daily balance sheet. All ODCs submit their reports regularly in compliance with SUGEF's regulations. Report forms are continually evaluated and revised when needed to keep them current with market and legislative changes. The latest revision took place in January 2008.

Accounting records, and the supplementary data sent to the AEMF, are sufficient to compile monetary statistics. The use of a common chart of accounts simplifies the compilation of monetary statistics. The codification of the chart of accounts allows for a detailed classification based on instrument, maturity, and currency denomination, but not for a proper sectorization. The SUGEF has issued precise instructions to the ODCs on how to complete and submit the required information. The BCCR has also produced a *Manual* to help ODCs complete the supplementary forms.

Data are electronically transmitted from the ODCs to the SUGEF, and from the SUGEF to the AEMF. After inputting manually the supplementary data received from the ODCs, the AEMF automatically generates the monetary surveys using the MONET database.

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

The DC survey is based on actual accounting records of the BCCR and all ODCs, except the short-term investment funds. Therefore, no sampling or estimations are employed by the AEMF. The monthly balance sheet data, together with the supplementary information provided by ODCs to the AEMF, permit an adequate identification of the accounts of residents and nonresidents, and a sectorization of the resident accounts, albeit with the shortcomings already explained in 2.3.1. Through cross-checking of the submitted data, the SUGEF monitors compliance by reporting institutions with its guidelines.

ODCs follow international accounting standards (IAS) and the IFRS. The balance sheet of the BCCR is prepared in accordance with international standards and audited by the Office of the General Comptroller of the Republic (CGR). Only once, in 2006, the BCCR's financial statements were audited by an external firm. There are on-going plans to hire an external firm to audit the BCCR's financial statement for a period of four years.

3.1.3 *Source data are timely*

The BCCR's balance sheet is prepared on a daily basis, and available the next day to the AEMF, which has on-line access to the accounting records of the DCO. ODCs transmit their balance sheets to the SUGEF within five working days after the end of the reference month. Data on credit must be reported within 11 working days. The SUGEF transmits data on ODCs to the AEMF within two weeks after the end of the month. ODCs send the supplementary data to the AEMF within ten working days after the end of the month. The AEMF produces timely monetary data, fully in compliance with SDDS requirements.

3.2 *Assessment of source data*

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

ODCs data received by the SUGEF are subject to automated consistency checks, such as the validation between assets and liabilities, and sectoral credit against the accounting data. Additionally, the SUGEF performs four controls. The SUGEF is in the process of adding 18 more warning controls, bringing its total number to 22.

The AEMF also runs consistency checks at the level of individual institutions, to verify that the data reported in the monthly balance sheets are consistent with the supplementary data reported for sectorization, that the interbank positions do not present serious differences, that all balance sheets maintain the identity “assets equal liabilities plus capital,” and that ODCs data on deposits and securities issued are consistent with counterpart data from public sector units. High value transactions are confirmed with the reporting institution. If inconsistencies are found, the AEMF contacts the reporting institution to solve the problem. These procedures allowed the AEMF to detect and correct errors in the sectorization of the instruments. However, this verification is not done automatically, but through visual and manual procedures.

The BCCR source data are analyzed for accuracy by the AEMF, investigating the magnitude of the changes in the accounts with respect to the previous month. The daily data on monetary aggregates are controlled against the factors that explain their expansion (or contraction). Also, a monthly control is performed on the interest rate paid on securities held and issued by the BCCR, to ensure consistency with the BCCR's policy on interest rates.

Recommendation: The AEMF should introduce an automated system for validating source data.

3.3 *Statistical techniques*

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

The DC survey is based on actual accounting records of the BCCR and the ODCs. Data reported by ODCs are normally complete, and the AEMF never faced the need to estimate missing information. For internal analysis (e.g., the monthly follow-up of the macroeconomic program), some figures are estimated applying a geometric growth rate based on a related variable, or simply repeating the latest available data.

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

Because data used to compile the DC survey are complete and based on the balance sheets of the institutions, very few adjustments are performed.

Monetary data are seasonally adjusted using X-12-ARIMA procedures, but only for internal use. Data disseminated by the BCCR are not seasonally adjusted. For the data reported to the IMF and the CMCA, estimations are used to sectorize accrued interest. The AEMF performs also the adjustment already described on securities issued by ODCs and held by another ODCs (see 2.4.1), making both figures equal and allocating the difference to the private sector.

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

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

Interbank positions are validated by the AEMF at the level of the institution, and also against the BCCR's own accounting records. The accounting data of the ODCs are validated against the sectoral data of the supplementary reports. The accounts of the BCCR are verified by analyzing the factors accounting for the expansion (or contraction) of the monetary aggregates, and comparing them against changes in the monetary aggregates.

Data reported on holdings of BCCR's securities are not validated against the debt registry of the BCCR, because the latter only register the original buyer, while often ODCs buy securities for their clients. The same applies for holdings of central government securities. In case of discrepancies, the data reported by ODCs are considered valid. Only in one occasion was it possible to compare data reported by ODCs on central government holdings with the government's debt records—for securities that could not be endorsed. In this case, a difference was detected due to misreporting by state-owned banks.

Monetary data are validated against government finance data only once a year, for year-end figures. Monthly data are not reconciled.

Recommendation: The DEM should validate monetary and government finance data on a monthly basis.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

If discrepancies arise during the validation process, the AEMF contacts the reporting institution to solve the problem.

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

The AEMF is committed to investigate any significant discrepancies that may be found. When discrepancies are detected, the revised data are published on the BCCR's website indicating the revision. If the revision is significant, a technical note is included, explaining the reasons for the revision.

3.5 Revision studies

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

Normally, monetary statistics are not subject to routine revision studies. This notwithstanding, the AEMF performed several studies related to, among others, the introduction of new financial instruments (forwards, financial derivatives, etc.); adjustments due to extraordinary circumstances, such as banks in liquidation; and harmonization with other international statistical standards. These studies resulted in important changes, such as the discontinuation of several adjustments that were performed when compiling monetary statistics; unification of concepts with the SUGEF for the sectorization of the economy; and revision of historical series of the monetary aggregates on two occasions. When data are revised, parallel historical series are compiled simultaneously, to facilitate the migration to the new series.

The results of the revisions studies are not made public, but kept for internal use only.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards

The BCCR posts on its website monthly data on net external position, net domestic credit, credit by economic sector, monetary aggregates and their components, the banking and financial sectors surveys, and the data compiled for the harmonization project for Central American countries, Panama and the Dominican Republic. Data on interest rates are posted daily on the BCCR's website. This periodicity fully complies with SDDS requirements.

The monthly bulletin on the economic situation of Costa Rica, *Boletín Mensual*, is available on the BCCR's website.

4.1.2 Timeliness follows dissemination standards

Central bank data are disseminated within one week after the reference month, and commercial banks data with a lag of three weeks. The financial system survey (equivalent to the DC survey) is disseminated five weeks after the end of the reference month. The daily indicators on interest rates are disseminated with a ten-day lag. This timeliness complies with SDDS requirements.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset

Monetary data are published according to a balance sheet framework that ensures the basic accounting identity that net foreign assets plus domestic assets equal total liabilities plus capital accounts.

As verified during the mission, positions vis-à-vis the BCCR as reported by ODCs, are consistent with the BCCR's accounts at an aggregated level for instruments and currencies. Also, interbank positions are consistent at an aggregated level for instruments and currency.

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

Monetary data are presented in consistent historical series since January 1987. When important changes in source data or methodology were introduced, the historical data were revised, and the new series was accompanied by a technical note explaining the revision. Examples of such revisions were the increase in the capitalization of the BCCR, the inclusion of the Banco Popular in the ODC survey in 1995, and the effect on the monetary aggregates of the crisis faced by investment funds and pension funds in early 2004.

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

Monetary and balance of payments statistics are compiled at the DEM and share common data sources. Both datasets are consistent.

Monetary data on credit to the central government by the BCCR, and deposits of central government with the BCCR have discrepancies with the corresponding data in GFS, which are only eliminated for year-end data.

Recommendation: The BCCR should work together with the Ministry of Finance to eliminate discrepancies in the fiscal data disseminated by both institutions.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule

Generally, monetary data posted on the CBCR website are final, but when provisional data are disseminated, normally for the accounts of commercial banks, a note indicates the provisional nature of the data. Once the data become final, the note is deleted. Extraordinary revisions are communicated to the general public through special notes.

4.3.2 Preliminary and/or revised data are clearly identified

Data are clearly identified as provisional through notes, but revised data are not identified. It is simply presented as final by default.

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

Revisions are briefly discussed in footnotes to the statistical tables. However, significant revisions are explained in more detail through technical notes linked to the corresponding table.

5. Accessibility

5.1 Data accessibility

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

Monetary statistics are disseminated on the BCCR's website in a user friendly presentation. Data are presented for the net international position of the banking and financial system, the monetary survey, monetary aggregates, domestic credit, deposits by type and currency, total credit to the private sector by economic activity, the money multiplier, interest rates, and the balance sheet and financial statements of the BCCR. All tables are easily accessible, contain a precise description of their data, and are exportable in an Excel format. Historical data are available from January 1987 onwards. BCCR's publications are posted on the website in electronic format. Missing from the data disseminated by the BCCR is the central bank survey, although its relevant indicators are available in the section on the SDDS of the BCCR's website, as well as on the IMF's DSBB.

Recommendation: The BCCR should publish the monthly central bank survey on its website.

5.1.2 Dissemination media and format are adequate

Statistics produced by the BCCR are disseminated in an electronic format and posted on its website. BCCR's publications are also posted on the website in electronic format. A small number of hard copies of the publications are available, mainly for archive purposes. Time series posted on the website can be exported in an Excel format. The latest available series at

the time of the mission correspond to March 2009 and February 2009, depending on the series. Although an option is given to access the BCCR's website in English, most of the documentation are presented only in Spanish.

The bulletin *Informe Mensual* contains not only real sector, balance of payments, fiscal, and monetary data, but an analysis of the main developments in each of these sectors, including graphs that facilitate the interpretation of the data.

Also available is a harmonized presentation of monetary data generated from the SRFs, within the framework of the project for Central American countries, Panama, and the Dominican Republic.

The SUGEF also disseminates balance sheets and financial statements of the ODCs, and a series of financial soundness indicators, at the individual institution level. The information is available with one-month lag.

5.1.3 Statistics are released on a preannounced schedule

An advance release calendar, with precise release dates four months in advance, is posted on the BCCR's website and strictly followed. The same advance release calendar is disseminated through the IMF's DSBB.

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

All data are released simultaneously to the public through their posting on the BCCR's website. When the *Informe Mensual* is released, the BCCR makes an announcement to the press communicating its publication.

5.1.5 Statistics not routinely disseminated are made available upon request

Users may request from the AEMF nonpublished, nonconfidential time series, which are delivered via e-mail. Staff of the AEMF may also be contacted by phone. These requests are very frequent, mostly from the academia. When the AEMF notices that some nonpublished data series are frequently requested, it includes them in the disseminated statistics.

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 compilation methodology for the data disseminated by the BCCR is explained in methodological notes accessible through a link available in all tables. Individual tables also contain explanatory notes relevant to the specific data.

Metadata on monetary statistics are available on the IMF's DSBB. The metadata on the DSBB was last updated in June 2008.

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

Monetary data disseminated by the BCCR provide different levels of details to meet users' needs. Methodological notes accompany the statistical tables.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized

Staff responsible for the content of each published table are identified, in the same table, with name, telephone number, and a link to their e-mail addresses. Assistance and support is provided to users, who can submit queries by contacting the person by phone or e-mail.

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

All BCCR's publications are free of charge and available on its website. The BCCR does not have a catalog of its publications, but highlights some of them on its website.

Table 5. Costa Rica: Data Quality Assessment Framework (July 2003): Summary of Results for Monetary Statistics
(Compiling Agency: Central Bank of Costa Rica (BCCR))

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X	X			Some source data are still being inputted manually. Data validation not fully automated.
0.2 Resources						
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X	X			Short-term investment funds excluded from the ODC survey. Social security system excluded from central government. Accrued interest not sectorized with its underlying instrument. Short-term securities issued by the BCCR not included in broad money. Securities issued by the BCCR and the ODCs valued at amortized cost, rather than at market prices.
2.2 Scope						
2.3 Classification/sectorization						
2.4 Basis for recording						
3. Accuracy and reliability						
3.1 Source data		X	X			Monetary data cross-checked against government finance data only once a year.
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of intermediate data and statistical outputs						
3.5 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X	X			Monetary data reconciled with government finance data only for year-end figures. Revision studies not made public.
4.2 Consistency						
4.3 Revision policy and practice						
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

VI. BALANCE OF PAYMENTS STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The Central Bank of Costa Rica (BCCR) is the agency that compiles, processes, and disseminates external sector statistics in Costa Rica. However, its *Organic Law* (Law 7558 of November 3, 1995, revised March 16, 2009),⁵ does not specifically mandate the central bank to compile these statistics. The Law does not also require reporting to the BCCR by the nonfinancial private sector, data for which are important for the compilation of external sector statistics.

The reference to the dissemination of macroeconomic statistics is included in Article 14(d) of the *Organic Law*, establishing that the BCCR shall publish a monthly statistical summary of the economic situation of Costa Rica, which shall include at least, primarily, information on variables such as: production, prices, monetary aggregates, exports, imports, and the balance of gross and net international reserves. The *Organic Law* authorizes the BCCR to define and publish the methodology used in the monthly economic report and any changes incorporated in the methodology. The economic situation report includes data on the external sector.

The External Sector Statistics Section (AESE) of the Economic Division (DE) is responsible for compiling and analyzing balance of payments (BOP) and International Investment Position (IIP) statistics, as well as other external sector indicators, including: foreign direct investment (FDI), the coordinated portfolio investment survey (CPIS), the coordinated direct investment survey (CDIS), total external debt, and the Data Template on International Reserves and Foreign Currency Liquidity (Data Template). The AESE is part of the Macroeconomic Statistics Department (DEM) of DE in the BCCR.

The *Organic Law* of the BCCR has been complemented by the Law 7839 of 1998⁶ and its subsequent amendments that established the National Institute of Statistics and Censuses (INEC) and the National Statistical System (SEN). In its Article 15(d), Law 7839 establishes that the BCCR is responsible for producing the basic statistics needed to prepare macroeconomic accounts. The INEC/SEN Law, with its most recent amendments, was published in the Official Diary, *La Gaceta* of June 14, 2002.

Recommendation: Seek to improve the legal framework authorizing the BCCR to request information for statistical purposes from the nonfinancial private sector.

⁵ http://www.bccr.fi.cr/flat/bccr_flat.htm.

⁶ <http://www.inec.go.cr/>.

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

The *Organic Law* of the BCCR is the cornerstone for the cooperation between the country's economic institutions and the BCCR, in order to achieve the central bank's statistical objectives. Article 40 of the Law stipulates that offices and agencies of the State and autonomous institutions shall provide assistance to departments of the BCCR that require it.

In order to obtain source data from public and private entities for the compilation of external sector statistics, the BCCR has established operational reporting arrangements with other entities. The General Customs Directorate (DGA) provides monthly information on imports and exports of goods; the Foreign Trade Promotion Enterprise (PROCOMER) submits monthly data that are used as preliminary figures for imports and exports; the Costa Rican Tourism Board (ICT) provides figures on inbound and outbound tourism; and the Directorate of Public Credit in the Ministry of Finance (MOF) provides information on the external public debt.

Statistics on real and financial transactions by nonfinancial private sector are compiled on the basis of surveys conducted by the Economic Surveys Section (AEE), also part of the DE. In addition, channels of coordination have been established with other Sections of the Macroeconomic Statistics Department for collecting statistics from the public and private financial sectors and some statistics from the services sector incorporated into the production figures.

The AESE coordinates periodic meetings with the Inter-institutional Foreign Direct Investment Group comprising the BCCR, the Ministry of Foreign Trade (MFT), PROCOMER, and ICT. The purpose of this group is to combine efforts for generating foreign direct investment (FDI) data, and thus avoid duplication of collection and dissemination activities, for which the BCCR is responsible.

An inter-institutional group is currently being formed to measure the production and exports of various services with the participation of the BCCR, PROCOMER, MFT, and INEC. In principle, the focus would be on activities involving services such as: information and communication technology, medical services, audiovisual services, and construction services: design, architecture, and engineering. This cooperation among main compilers will promote the consistency and standardization of efforts and help to reduce the burden on the institutional entities consulted.

The AESE obtains information through two main channels: (i) surveys aimed at the non-financial private sector, the banking sector, and public enterprises, carried out by AEE; and (ii) direct consultations by AESE with the public sector, the General Superintendency of Financial Institutions (SUGEF), international organizations, such as the Bank for International Settlements (BIS), and some of the central banks in the region.

In addition, there is a close relationship with the MOF to coordinate the generation of data on external public debt, and with the ICT to compile data on the tourism sector, with respect to arrivals and departures of travelers. The cooperation with MOF could be improved to further

enhance the timeliness and consistency of data. Staff of both the AESE and the AEE regularly establish personal contacts by telephone and/or e-mail with the main providers of the basic statistics for compiling the BOP and the IIP, in order to explain any changes in the methodology or the forms used for compiling the data.

Formal channels have been established with the National Land Registry to obtain figures on foreign investment in the real estate sector. In addition, data for the CPIS are obtained quarterly from the SUGEF, the General Superintendency of Securities (SUGEVAL), and the General Superintendency of Pensions (SUPEN).

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

The BCCR is required to protect the confidentiality of specific information provided to it by individuals and organizations under Article 14 of its *Organic Law*. Also, the Law 7839 creating the SEN clearly establishes that information obtained for statistical purposes in the national statistical system shall be strictly confidential, except for information coming from public institutions and non-state public institutions, which shall be freely available to citizens. The *Autonomous Regulations on Services (RAS)* of the BCCR, which constitute the internal staff regulations, stipulate that employees must maintain complete discretion in the operations, business dealings, and activities between the BCCR and its customers. Articles 117(d) and (e) of the RAS prohibit employees from using electronic archives and databases for purposes that conflict with the objectives of the institution.

The RAS of the BCCR and the INEC/SEN law establish procedures for preventing the use of information for personal purposes. The regulations specify the following as inappropriate conduct: (i) committing indiscretions in protecting the confidentiality of the operations of the BCCR and the interests of its customers; or (ii) disclosing, with or without authorization, the contents of work-related books or documents for inappropriate purposes, or transmit them to third parties. The statistics law stipulates that public employees, individuals, or organizations that provide services to agencies of the SEN and that violate statistical secrecy shall be punished in accordance with Article 203 of the Penal Code. The INEC/SEN law also stipulates that individuals or organizations can provide or publish aggregated data but are not permitted to provide individual statistics from their information providers, except when specifically authorized to do so by the provider of the information. For these purposes, aggregated data shall be considered data that involve three or more individuals or organizations.

In the AESE and in AEE, access to individual data is restricted to employees of the Sections whose professional activities are directly involved in compiling, tabulating, and evaluating the data. Measures have been taken to protect information; for example, information from enterprises is coded and only the employees responsible for data processing have access to the codes and names of the enterprises.

Article 132 of the BCCR's *Organic Law* prohibits the SUGEF, managers, members of the National Council, employees, advisors, and any other individual or legal entity providing

services to the Superintendency from releasing information relating to the documents, reports, or transactions of the supervised institutions. Violation of this prohibition shall be punished in accordance with the provisions of Article 203 of the Penal Code. Similar violation of employees of the Superintendency, also constitutes a serious offense. Finally, Article 171 of Law 7732 establishes that one of the functions of the National Supervisory Council for the Financial System is to regulate the exchange of information among the various Superintendencies, in order to carry out fully its functions of prudential supervision. Any Superintendency that receives information in accordance with this paragraph shall have the same obligations regarding confidentiality as the party that initially received the information.

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

The BCCR's *Organic Law* does not specifically assign the task of compiling the BOP and the IIP to the BCCR. Article 15(d) of the INEC/SEN law officially assigns to the BCCR the task of preparing the basic statistics needed to prepare the national accounts and other macroeconomic accounts. However, the BCCR has no legal basis to request information from the non-financial private sector in order to compile the BOP and IIP. Thus, it is not permitted to impose sanctions on entities that do not provide data. In view of this limitation, staff of AESE and AEE have adopted procedures to motivate data providers to report their information, including letters explaining to respondents the importance of providing the requested data and sending them reports based on the statistical contribution. The average level of response to surveys is 90 percent.

The data on external public debt are aggregated by the Debt Management and Analysis System (DEMFAS) supported by the Directorate of Public Credit under the MOF and captured directly by the AESE. Coordination takes place on a regular basis with the MOF; the AESE processes the data according to the needs of external sector statistics.

0.2 Resources

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

Financial, technical, and human resources have been used efficiently to adequately compile transactions between residents and non-residents of the country. The process adopted by Costa Rica for entering international markets and economic globalization introduce great dynamism in the activities that must be captured to generate robust external indicators that portray economic reality in the country.

A series of actions have been implemented to compile and disseminate the BOP and IIP on a quarterly and annual basis respectively. In this context, many enterprises that are surveyed annually have moved to quarterly reporting, which requires more financial and human resources.

The staff of the AESE and AEE have sufficient technical resources to compile BOP and IIP statistics and other external sector indicators. Each member of the team has a personal computer with access to the internet and appropriate software. The data are stored on Excel spreadsheets and databases, which facilitates handling and the application of security controls required by the confidential nature of the information. The main historic database with quarterly and annual information from the surveyed enterprises is stored in the BCCR.

The members of AESE have a solid conceptual and methodological knowledge of the recommendations of the fifth edition of the IMF's *Balance of Payments Manual (BPM5)*. Most of the team members have several years of experience and have received training in Costa Rica or abroad in the methodology for compiling the BOP and the IIP. The BCCR encourages staff to participate in courses, seminars, and working groups organized by the IMF, the Center for Latin American Monetary Studies (CEMLA), the Central American Monetary Council (CAMC), and other institutions.

Beginning in May 2009, the staff of the AESE will increase from six to nine members, including the chief.⁷ This new structure will allow the AESE to better meet the requirements for constructing and analyzing external sector statistics.

0.2.2 Measures to ensure efficient use of resources are implemented

The DE has an Annual Operating Plan (PAO) that takes into consideration the various departments and areas that contribute to helping the institution achieve its organizational objectives. Parameters are established for measuring progress in task completion, with quarterly revisions. The BCCR authorities are committed to providing up-to-date equipment and software, which are used effectively in the process of compiling and disseminating statistical data.

Since the application of the Data Quality Assessment Framework (DQAF) for BOP in 2001/2002, two follow-up statistical missions have been carried out by the IMF, which have brought about improvements in the coverage, timeliness, and dissemination of BOP and IIP.

0.3 Relevance

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

There are no formal mechanisms to evaluate the quality of statistics in the BCCR. Nevertheless, the BCCR authorities have been encouraging the implementation of surveys to measure the satisfaction of both internal and external users regarding the quality of and timeliness of macroeconomic statistics, including that of the external sector. Staff of AESE have participated in seminars and conferences on BOP, IIP, external debt, Data Template, CPIS, and CDIS with a view to implement international statistical standards.

⁷ The increase in staff of the AESE has been implemented as scheduled.

In addition, the BCCR has received technical assistance from the IMF and other relevant institutions in several methodological disciplines including external sector statistics. To keep abreast with new statistical standards, in January 2009, the head of the AESE participated in the first outreach seminar organized by the IMF in Latin America on the new *Balance of Payments and International Investment Position Manual (BPM6)* in Brasilia, Brazil.

Currently, the BCCR has not implemented specific surveys to gauge quality of external sector statistics.

Recommendation: Set up a BCCR statistics users group to provide a permanent forum for discussing ways of better meeting users need.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality

The authorities recognize that BOP and IIP statistics must be compiled according to the highest standards of quality and timeliness to support decision-making. In this context, AESE staff are encouraged to participate in courses and international seminars, and there is support for receiving technical assistance from relevant international organizations aimed at reinforcing the generation of external sector statistics in accordance with international standards. To this end, the BCCR maintained a very good track record of implementing recommendations of IMF's technical assistance missions, reflecting the authorities' commitment to upgrading data quality. The BCCR's AESE promotes the principle of institutional excellence, encouraging staff members not only to maintain but to enhance the quality with which they perform their duties. BCCR uses external evaluations, such as TA missions and ROSCs to assess and improve the quality of the statistics. AESE management and staff are aware that quality, in all its dimensions, is an essential component of statistical work.

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

AESE maintains measures for checking the intersectoral consistency of the data received from respondents, and carries out periodic monitoring processes about response rates, errors, and timelines of reported data. Intersectoral consistency is assured with the current system in place that allows all areas in the BCCR in charge of the compilation of macroeconomic statistics to share similar sets of source data.

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

AESE contributes to the *Annual Services Plan* in line with the *Organic Law* of the BCCR. The contribution is made by each area in the institution, and it is integrated at departmental level. The *Annual Services Plan* is an operations plan that is prepared each year and monitored on a quarterly basis within the BCCR and its main objective is to evaluate through cost-benefit analysis the plan of services for the Costa Rican Society.

1. Assurances of integrity

1.1 Professionalism

1.1.1 *Statistics are produced on an impartial basis*

There are legal provisions that give the BCCR professional independence. The BCCR is entitled to establish the methodology used to prepare the statistical summary of the economic situation. It is the obligation of the BCCR to publish and disseminate this methodology. Professional staff have significant degree of autonomy in their work to implement internationally accepted standards for external sector statistics.

Within the BCCR, AESE maintains independence in its statistical functions. For instance, its decisions on reporting guidelines and report forms do not have to be submitted to the Board of Directors. Recruitment of staff is based on competence. For staff positions with statistical content, only candidates with relevant educational background and sufficient statistical knowledge are hired.

Formal and on-the-job training in methodology and compilation methods are provided to staff. The BCCR takes an active stance in nominating staff for BOP seminars, workshops, or courses organized by international organizations (for example, the BOP Methodology course that is offered by the Statistics Department of the IMF (STA), courses at CEMLA, and at the CAMC). Staff benefit directly from working with outside experts who provide technical assistance on external sector statistics.

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

The AESE staff is independent in choosing data sources (e.g., administrative records or surveys) and methodologies for compiling the BOP on the basis of statistical considerations, examining the coverage, reliability, and timeliness of the information available from alternative sources. The design of surveys takes account of the international methodological recommendations of the *BPM5* and the recommendations of external experts.

The publication of data and their timeliness are guided by the Special Data Dissemination Standard (SDDS). The presentation of the BOP in the statistical publications is, to a large extent, based on the *BPM5*. Besides this, requests and comments of users are taken into consideration when deciding on specific aspects of dissemination.

The BCCR disseminates important changes to the methodology such as the adoption of the *BPM5*. The reports and analysis of the BOP are made with objectivity and independence. The BCCR is fully committed and adheres to the standards established by the SDDS.

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

The BCCR is the only entity that publishes and analyzes BOP. The AESE aims to promote a correct interpretation and use of its data through the frequent publication of notes regarding the evolution of the BOP in its *Annual Report* and in its quarterly *Bulletin of Balance of Payments Statistics*. These information is also available on the Internet, although it does not include explanatory notes.

AESE staff are always in close contact with journalist. Due to this proactive stance, the BCCR has had no experience with serious misinterpretations of its statistics in the media. The Executive President of the BCCR regularly holds press conferences to discuss new data and analyze general developments in the economy, including BOP developments. The BCCR closely follows media coverage of its statistics. If need arises, the BCCR reacts quickly through its Communication Department.

1.2 Transparency

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

The BCCR publishes the BOP statistics on its website, and includes methodological notes through a link to the Costa Rica's SDDS website specifying the terms and conditions under which the statistics are compiled, as well as the safeguards on the confidentiality of individual reporter's data. The Internet site of the BCCR also includes the e-mail address of the person responsible for answering inquiries on particular statistics and provides clarifications and additional information on the BOP statistics.

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

The BCCR Board of Directors has access to some statistics before they are published. The members of the Board include the President of the BCCR, the Minister of Finance, and private sector members. This access to the data prior to their release is not communicated to the public in national websites, but is stated in the SDDS metadata, which is of public domain.

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

The BCCR's statistical products display the name and logo of the BCCR. Information is available to the public on the following terms: "*Reserve Rights BCCR © 2003–2008. All Images as well as the textual content are exclusive property of the BCCR and cannot be used by third parties or companies without the written consent of the BCCR.*"

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

Only important changes in methodology, such as the conversion of the BOP methodology from *BPM4* to *BPM5*, are published simultaneously with new statistics. The BCCR has plans to provide advance information on changes in the statistical methodology, source data, or statistical techniques in its publications both in hard copy and on the Internet.

1.3 Ethical standards

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

The BCCR establishes procedures for preventing the use of information for personal purposes. The regulations specify the following as inappropriate conduct: (i) committing indiscretions in revealing information that comprises the confidentiality of the operations of the BCCR and the interests of its customers; and (ii) disclosing, with or without authorization, the contents of work-related books or documents for inappropriate purposes, or transmitting them to third parties. The RAS of the BCCR, which constitutes the internal labor regulations, stipulates that employees must maintain complete discretion in the operations, business dealings, and activities within the BCCR and with its customers. Articles 117(d) and (e) of the RAS prohibit employees from using electronic archives and databases for purposes that conflict with the objectives of the institution.

The Law 7839 creating the SEN clearly establishes that information obtained for statistical purposes in the national statistical system shall be strictly confidential, except for information coming from public institutions and non-state public institutions, which are freely available to citizens. The Law stipulates that public employees, individuals, or organizations that provide services to agencies of the SEN and that violate statistical secrecy shall be penalized in accordance with Article 203 of the Penal Code. The Law also stipulates that individuals or organizations can provide or publish aggregated data but are not permitted to provide individual statistics from their information providers, except when specifically authorized to do so by the provider of the data. For these purposes, aggregated data refer to data that involve three or more individuals or organizations.

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 of Costa Rica closely follows internationally accepted standards and guidelines. *BPM5* has been taken as point of departure when the BCCR began compiling and publishing balance of payments under a revised methodology in 1997. The BCCR is always closely communicating with the IMF's STA to discuss the implementation of *BPM5* rules. In particular:

- Current, capital, and financial accounts of the balance of payments statement are defined according to the guidelines of the *BPM5*, and the current account balance is equal (with sign reversed) to the net capital and financial account balance with errors and omissions included in a separate account.
- In constructing the balance of payments statement, a double-entry system is applied as a basic principle, and the net residual is embedded in the errors and omissions item.
- A clear distinction is made between the income component and the goods and services components.
- The financial account provides for a separate recording of transactions in assets and transactions in liabilities.
- The directional principle is applied in recording foreign direct investment.

The data are split up in twelve categories under five main headings:

- Current account: goods, services, income and current transfers.
- Capital account: capital transfers and acquisition/disposal of nonproduced nonfinancial assets.
- Financial account (excluding official reserves): direct investment, portfolio investment, financial derivatives, and other capital.
- Reserve assets.
- Errors and omissions.

Just like the conceptual framework, concepts and definitions used to compile the balance of payments statement in Costa Rica are in conformity with *BPM5* guidelines. This means that resident institutional units are defined as units that have a center of economic interest in Costa Rica.

International organizations and supranational authorities are not considered residents of Costa Rica or any other national economy and are distinguished separately. Units of general government established abroad, e.g., Costa Rican embassies are considered to be resident of Costa Rica, and vice versa. In general, the one-year principle is applied to people that for balance of payments purposes are no longer considered to be a Costa Rican resident (with the exception of students and health related travel, as mentioned in *BPM5*), such as when they intend to work in a foreign country for more than one year. The balance of payments records the economic transactions between resident economic entities with nonresidents during a particular period. Conceptually, the time of recording of a transaction corresponds to a change in ownership. In practice, a transaction in goods is recorded at the clearing by

customs, in which trade statistics are used as a source. Services are recorded at the moment they are reported. For portfolio investment, preference is given to record a transaction on the trade date. The 10 percent rule for distinguishing direct investment from portfolio investment is applied mechanically by the AESE.

2.2 Scope

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

The statistical records identify the main transactions between residents and nonresidents. There are no estimates carried out on smuggling. There is difficulty in measuring transactions with nonresidents of the private sector related to: (1) services (mainly construction and health services); (2) compensation of employees (in particular seasonal workers in Costa Rica); and (3) debt transactions (credits and debits) for all sectors, which are not entered when due, but when they are actually reported. Most of the transactions with nonresidents are made through the resident financial system.

Recommendation: The AESE, in coordination with AEE, should identify through the business directory construction activities in Costa Rica that have a component of direct investment, and include them in the financial account. Regarding the compilation of data on health-related activities and compensation of seasonal workers, the AESE will start implementation of specific surveys in these areas.

2.3 Classification/sectorization

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

Institutional units are classified and attributed to the relevant sector according to *BPM5*. The unit of account in which the balance of payments and IIP are compiled is the U.S. dollar. The balance of payments in Costa Rica is compiled according to the principal standardized components classified in the main groups of accounts: the current account which includes goods services, income and current transfers; the capital account; and the financial account. The analytical balance of payments is published including reserves as a below-the-line component.

Trade operations of the high technology industry have been creating strong distortions on transactions with nonresidents due to valuation criteria that would affect the correct interpretation of the current account. AESE has been making adjustments that do not affect the current account of the balance of payments, although this implies a classification adjustment among the goods and income accounts.

Claims on Honduras' securities and the capital contribution to the Central American Fund for Monetary Stability (FOCEM) are classified in official reserve assets. These assets of the

BCCR should be part of other external assets of the monetary authorities classified according to instrument in the financial account.

Deviations with respect to classification and sectorization from internationally accepted guidelines are subject of discussion within the BCCR working groups and kept under close review.

Recommendation: Although not considered a technical issue, the BCCR should exclude the capital contribution to FOCEM and the claim on Honduras' securities from official reserve assets since these are to be classified in other portfolio assets of the monetary authorities both in the balance of payments and IIP.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks

In general, the balance of payments and IIP are valued at market prices according to the recommended guidelines of *BPM5*.

Imports and exports are converted into f.o.b. prices. When there are holdings of monetary gold it is valued at market prices. Financial instruments traded on markets are mostly compiled at market value. Non-tradable financial instruments are valued at nominal value. Direct investment transactions and stocks are compiled at nominal value, while according to *BPM5* these should be recorded at market value. Respondents report nominal value or historic costs if no information on market value is available in the financial administration. In banking statistics, transaction estimates are derived from stock data. The value of the transactions excludes valuation and other changes.

Most balance of payments transactions are in U.S. dollars and therefore present no conversion problem. Respondents must submit their reports in thousands of U.S. dollars. If need be, AESE converts to the net average exchange rate during the reporting period. Banking transactions in the financial account are derived from information on the banks' annex form to AESE, which is requested in U.S. dollars.

The high technology industry in Costa Rica does not report market prices of its transactions in goods with nonresidents, creating serious distortions due to the use of transfer prices instead.

Transactions of international reserves are obtained from difference in positions within the balance of the BCCR that are reported in U.S. dollars. The value of the transactions excludes valuation and other changes.

Recommendation: Estimate flows and stocks of direct investment equity at market prices. Estimate market prices of the transactions in goods of the high technology industry in Costa Rica.

2.4.2 Recording is done on an accrual basis

The principle governing transactions and their time of recording is the change of ownership. The criteria recommended by the *BPM5* are generally followed with the exception of interest on public sector external debt, which is recorded on a due-for-payment basis. With respect to goods and services transactions, approximations are used in accordance with *BPM5*.

Transactions in goods are recorded at the time the goods cross the border. Transactions in services are recorded when invoiced. Interest on financial instruments of the financial sector is recorded on an accrual basis. Dividends and reinvested earnings are recorded on the dates declared. Loans are entered in the accounts at the moment of actual disbursement and payments. Loan repayments are not entered when due, but when they are actually made.

Recommendation: Record transactions related to government external debt liabilities on an accrual basis.

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

Following the recommendations of *BPM5*, current and capital account transactions are recorded on a gross basis. To ensure proper reporting, the BCCR collects information on financial account transactions mainly on a gross basis, but the actual recording in the financial account is done on a net basis, separately for assets and liabilities. The directional principle in direct investment is applied.

3. Accuracy and reliability

3.1 Source data

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

The data used to compile the balance of payments are generally considered adequate. However, it is considered necessary to improve the coverage of the private sector transactions by means of extending the use of surveys for: (1) transactions on services (mainly construction and health services) and (2) compensation of employees. The main sources used to compile the BOP and IIP of Costa Rica are:

(a) Import and export statistics based on customs records and compiled by the DGA, including goods not subject to special territory regimens (customs territory) and those subject to the special inward regime (“maquiladoras”).

(b) PROCOMER, which provides statistics on foreign trade and overseas transactions of companies subject to the free trade regime (this agency provides preliminary data on exports based on documents regarding export intentions).

(c) INTEL, a company subject to the free zone regime, which reports directly to the BCCR for preparation of national accounts and balance of payments statistics. This company does not complete the surveys but rather provides additional tables to the central bank.

(d) Surveys of direct foreign investment companies and national companies that carry out transactions with nonresidents. These surveys are conducted to obtain positions from direct investment, portfolio investment and other investment, as well as other items pertaining to the current and financial account. These surveys are conducted by the AEE.

(e) Surveys conducted by the AEE to compile services and transfers.

(f) The single survey conducted by the Ministry of Commerce (PROCOMER) on the intention to invest in Costa Rica.

(g) Estimates by the ICT on travel;

(h) External Debt data provided by MOF and available directly to the BCCR through DMFAS.

(i) Information from AEMF on external transactions of the banking system in Costa Rica.

(j) Foreign assets and liabilities accounts of the BCCR's balance sheet, which provides information on official reserves and overseas assets and liabilities of the BCCR.

(k) Information from MOF on government's foreign transactions, e.g., transfers received from abroad, embassy expenses, etc, and.

(l) The stock exchange that provides information on resident holdings of securities issued abroad by the private sector and by the government.

Administrative data sources are classified according to the needs of AESE for the compilation of the balance of payments and the IIP. In particular, the Plan of Accounts that is reported by each financial entity to SUGEF does not have the classification system used by AESE. However, the information is requested through an annex form that the financial institutions report directly to the BCCR. The classification system is used for securities, loans, deposit in current accounts, and term deposits. The manual used to complete the annex clearly explains the residency criteria.

The AEE maintains a registry that includes all import and export companies, including companies engaged in processing goods imported for later export, which operate under the following special processing regimens: inward processing ("maquiladoras") and free zones. In addition, there is a list of special respondents that are surveyed and includes companies that provide services, government entities, embassies and international cooperation agencies. The ED has a directory of industries prepared in cooperation with INEC, which is also used to complement and cross-check the AEE registry of enterprises.

The registry of companies is updated periodically with records of new companies carrying out transactions with nonresidents provided by the development initiatives coalition, a business group, and PROCOMER. The annual sample includes all processing companies and the most representative companies carrying out transactions with nonresidents. The sample is revised annually to eliminate companies that either close, or incorporated into new companies. Starting 2000, quarterly surveys were introduced based on a reduced sample of the principal companies. The INTEL company, the biggest company in the processing industry, provides monthly and quarterly data to the BCCR.

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

There has been substantial progress in the improvement of source data with the aim to adjust these data to the definitions of *BPM5*, and to improve the coverage and the classification of the balance of payments.

Starting 2000 a quarterly survey of businesses and institutions was implemented. A set of instructions to complete both the quarterly and annual surveys for balance of payments purposes is available to reporters, which includes concepts and definitions according to the recommendations of *BPM5*.

The main sources used to compile the balance of payments in Costa Rica are:

Goods: The BCCR compiles data for exports and imports on the basis of customs declarations received from the DGA and PROCOMER. Export data are valued on an f.o.b. basis, and import data are valued on an f.o.b. and c.i.f. basis. The BCCR makes the following adjustments: (1) valuation, for those goods whose final price is not known at the time of shipping and preparation of the customs declaration; (2) time of recording, for goods shipped before the date on which the customs declaration is completed; (3) coverage for goods without customs records, such as goods procured in ports by carriers, border transactions of electricity, and re-exports; and (4) classification, to allocate the freight and insurance import charges to the corresponding services items.

Services: Regarding the item *Transportation*, the BCCR obtains data on freight, passenger, and other transportation services, as well as on other international transactions by air, land, and sea transportation companies, from information reported in the questionnaires it sends to such companies. On *Travel*, the BCCR bases estimates on data the ICT reports on the number of foreigners visiting Costa Rica and residents traveling abroad. It also uses data from ICT sample surveys on per capita spending and average length of stay. The Directorate General of Migration and Foreign Travel provides the ICT with monthly data on the number of nonresident travelers entering Costa Rica and the number of residents leaving the country. The ICT undertakes surveys quarterly to derive the average amount spent and the average stay. As regards to *Other services*, the item *Insurance*, the credit entries cover claims received. The debit entries record amounts deducted from c.i.f. imports. By law, no resident companies provide merchandise insurance services in Costa Rica. For *Royalties and license fees*, the BCCR derives the data from the survey. On *Other business services*, credit and debit

entries include transactions connected with communications, agents' fees, professional and technical services, operational leasing, and miscellaneous services. Finally, on *Government, n.i.e.*, data include government services connected with embassies, international organizations, etc. These institutions, as well as the Ministry of External Relations and Religion, provide the data.

Income: The component of investment income includes income accruing from direct investment in Costa Rica and income from investment abroad by Costa Rican enterprises. Data on direct investment income concern distributed and undistributed earnings and corporate direct investment losses. Also included is interest on the assets of the BCCR, commercial banks, and the INS abroad, as well as interest received by private companies on trade credits extended and deposits abroad. The MOF and the BCCR itself provide the data on the interest on foreign public debt. The BCCR obtains interest of private debt through the survey.

Current transfers: The BCCR obtains data on private sector transfers from the survey and gathers data on general government transfers from consultations with the entities concerned. The BCCR reports duties, taxes, grants (in cash and in kind), workers' remittances, pension payments, and mailed gifts (parcel post) under this heading.

Capital Account: The entries in the category of capital transfers include data on external debt forgiveness and, if available, data on other capital transfers.

Direct investment: Data obtained from the survey include the provision of capital, reinvested earnings, and intercompany debt transactions. In order to validate direct investment data compiled from the survey, there is a cross-check made with the survey on the "investment intentions" elaborated by PROCOMER. The BCCR has broadened the coverage of direct investment by including foreign direct investment in real estate in Costa Rica based on information from the National Land Registry.

Portfolio investment: The BCCR and the MOF are the data sources for official portfolio transactions (e.g., bonds issued by the public sector). For private sector portfolio transactions, the BCCR obtains the data from surveys, custodians, and the Coordinated Portfolio Investment Survey.

Other investment: The sources of information for official financial transactions (capital subscriptions to international organizations and foreign public debt) are the BCCR and the MOF. For the private sector, the BCCR uses the survey to compile data, which include, among other things, deposits by residents in banks abroad, trade credits (granted and received), export and import prepayments, and loans.

Reserve assets: The BCCR's assets include monetary gold (when such holdings exist), the reserve position in the IMF, credit balances in the Central American Clearinghouse, subscriptions to the FOCEM, bank deposits abroad, and foreign securities. Data are obtained from BCCR statements.

The data that are obtained from surveys as well as from administrative records and other external sources used to compile balance of payments statistics provide reasonable approximations of the methodological requirements of the balance of payments.

Questionnaires were designed taking into account the *BPM5* guidelines. Currently, interest on external public debt is calculated by the DEMFAS system on a due-for-payment basis rather than on an accrual basis.

Because external debt data are also compiled by the BCCR and are derived from the same reconciliation model as the balance of payments, they are fully consistent with the international investment position and in line with the recommendations of *BPM5*.

3.1.3 Source data are timely

The timeliness is mainly determined by the requirements of the SDDS. Data collection and processing timetables adequately meet the standards of timeliness and periodicity recommended for disseminating balance of payments statistics. In some cases however, owing to the periodicity of the source data or established deadlines, preliminary figures are published based on estimates that are revised as soon as the next round of data processing is in place. Overall, the timeliness of source data has improved in recent years.

The deadline for responding to the surveys is clearly indicated. AEE staff monitors, on a continuous basis, the time the survey is in the field until it is received back by the BCCR. If need be, there is follow up by telephone, e-mail correspondence, or staff visits to the enterprises in those cases in which support to fill out the surveys is requested or needed.

The timelines of the goods data has improved considerably. According to the SDDS guidelines on timelines, preliminary data on goods are compiled, processed and disseminated 20 days after the end of the reporting period. Preliminary import data with a much broader detail are available with a month-lag, while the same breakdown for exports is available two months after the reference period. In both cases these data are subject to revisions. Preliminary information on exports is based on the Unique Customs Documents (DUA), which later, during the compilation process, are substituted with the final Customs Declaration provided by DGA.

3.2 Assessment of source data

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

The AEE has prepared procedural manual that document the management, processing, and quality control of the annual and quarterly balance of payments surveys. These manuals are for internal use and are also used to train new staff in the AEE.

The surveys are designed to be easy to complete and process electronically. A series of measures have been established to control quality and to conduct appropriate and timely verification of the information provided in the surveys before and after their electronic processing. Procedures have been developed to verify coding and tabulation errors and conduct additional test when the information has been processed. At the end of each compilation cycle (quarterly and annual), the AEE prepares and distributes internally a report with the main results on the data compiled, in regard to coverage and levels of response.

The BCCR has developed procedures to reconcile external debt statistics prepared by the AESE vis-à-vis external sector statistics prepared by the MOF. This reconciliation is made electronically in a special format. The AESE has direct access to DMFAS, which is the software shared by MOF and BCCR to manage debt statistics.

Information about nonsampling errors is monitored, including undercoverage, misclassification, and nonresponse. The AEE identifies outliers and other atypical differences in periodic responses by reporters. Extreme values are confirmed with respondents. If there are questions from the BCCR, respondents are contacted directly to confirm data.

3.3 Statistical techniques

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

In general, solid procedures to compile data are used. Complementary information is employed in cases of nonresponse and for the elaboration of estimates. The annual survey is a sample that includes the most representative companies subject to the general regime and those operating under special regimes. Because it is a sample based on pure identification criteria, the sampling value cannot be determined. However, the representativeness of the results of the survey is evaluated by comparison with the principal components of the balance of payments. The quarterly surveys on the other hand, are samples that have increased the coverage from 100 enterprises in 2001 to 296 in 2009.

Procedures for imputation and adjustment for nonresponse are soundly based. Appropriate use is made of ancillary and benchmark information in compiling estimates. When the reported values are out of range or improbable, adjustments are made replacing them with information from other sources or with estimates. Estimation techniques are employed to adjust data for missing observations in statistical collections. The AEE is in charge of reconciling discrepancy between the sum of the quarterly data and data from annual surveys.

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

The information from DGA separately records freight and insurance values from imports data which is recorded on a c.i.f. basis, thus it is not necessary to determine a conversion factor. Preliminary data on trade by PROCOMER are replaced in a very short period of time by robust data from the DGA. Data related to taxes are obtained from the settlement of the General Budget of the Republic prepared by the MOF. For the item travel, data from the

database of migration authorities are used, identifying the number of incoming travelers as well as departures by residents. This work is undertaken on a quarterly basis by the ICT, which also estimates average expenditures of travels visiting Costa Rica and residents traveling abroad. Regarding telecommunications, data from the two main companies are gathered directly. Finally, through SUGEF, data are compiled on financial intermediaries, including financial services and commissions.

Currently, no partner-country data are used to adjust trade data. Illegal activities are not recorded as such. The BCCR makes no seasonal adjustment of the balance of payments because this is not required by international organizations and users have not shown any interest.

Recommendations: Develop sound statistical techniques to estimates nonrecorded trade and include them in goods.

3.4 Assessment and validation of intermediate data and statistical outputs

3.4.1 Intermediate results are validated against other information, where applicable

Information reported in the financial press is used to verify direct investment and other transactions, such as debt issues abroad by residents. For direct investment, the data compiled through the current surveys are compared with the information by PROCOMER on the “intention of investments.” These types of transaction are monitored specifically from its origin up until the final compilation of the balance of payments, external debt, and IIP. Other intermediate results are checked against other independent data sources, as in the case of BIS data.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

The BCCR is responsible for the quality of the data regarding all external sector statistics. Through a series of consultative structures, the quality of the intermediate data is assessed by the AESE in coordination with AEE. In principle, BOP and IIP are consistent because they are compiled from the same source data. In addition, data on investment income are assessed in relation to corresponding stock data.

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 constantly monitored, and efforts are made to understand what statistical deficiencies may have caused them. The balance of payments and IIP results are checked against the CPIS to validate or detect any inadequacies in regular data sources. The available information on banks is also compared with BIS data. The BIS is the basic data source for external deposits of nonbanking institutions. Regarding workers remittances to Nicaragua, these are cross-checked and analyzed in close collaboration with the Balance of Payments office in the Central Bank of Nicaragua.

3.5 Revision studies

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

There are no formal studies to assess revisions to the balance of payments statistics. However, the BCCR is constantly seeking to improve its statistical processes, and it takes into account the recommendations of external experts who have provided technical assistance.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards

The complete set of external sector statistics prepared by the BCCR are disseminated with the periodicity established in the SDDS.

- BOP statistics are disseminated quarterly.
- IIP is disseminated annually.
- External debt statistics are disseminated quarterly.
- Data template on international reserves and foreign currency liquidity is disseminated monthly.
- Official reserve assets are disseminated weekly.
- Merchandise trade is disseminated monthly.

4.1.2 Timeliness follows dissemination standards

Timelines of the external sector statistics follows the IMF's SDDS dissemination standards.

- BOP statistics are disseminated 10 weeks after the reference period.
- IIP is disseminated two quarters after the reference period.
- External debt statistics are disseminated one quarter after the reference period.
- Data template on international reserves and foreign currency liquidity is disseminated three weeks after the reference period.
- Official reserves are disseminated three days after the reference period.

- Merchandise trade is disseminated twenty one days after the reference period.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset

The main components of the BOP are generally classified according to *BPM5*. Concepts, definitions, and classifications for producing quarterly and annual balance of payments statistics are the same. The sum of the quarterly data and the annual data are consistent because annual data are obtained from quarters. Quarterly and annual BOP statistics are derived from the same sources and cross-checked for consistency.

Financial transactions data are reconciled with changes in the IIP. The results of the reconciliation are shared among the areas of the DE, mainly AESE and AEE. Over the long run, net errors and omissions have been considerable, but stable.

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

Quarterly BOP statistics are available since the first quarter of 1999 under the *BPM5* methodology, which make them consistent and reconcilable over a period of ten years. Data are available at the website of the BCCR:

<http://indicadoreseconomicos.bccr.fi.cr/indicadoreseconomicos/>. The first publication that included the revised series following the transition to *BPM5* was *Costa Rica Balance of Payments 1992–1997*, which included a methodological note explaining the principal changes vis-à-vis the previous *BPM4* methodology.

Annual data are equally consistent with the last ten years because they have been classified according to *BPM5* as well. The annual series are compiled since 1950, and are available in hard copy in the publication, *50 Years of BCCR Statistics*.

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

The BOP can be reconciled with national accounts, monetary, trade, and external debt statistics. Certain reclassifications are made in two items of the current account (goods and the income account) that are fully reconcilable with national accounts. However, national accounts statistics do not show the adjustments to the goods account that are made in BOP.

This reclassification in balance of payments is made to explain the lack of market values of the high technology sector in Costa Rica. Although the different classification is well known within the BCCR, there is no reference in the balance of payments methodology to alert the users of statistics.

Flows of reserve assets cover the same accounts as those recorded in the monetary and financial statistics. External debt statistics compiled in the BCCR using data from DEMFAS provides the appropriate breakdown of initial balances, disbursements, amortizations, interest, and other adjustments, all of which are reconciled with data from MOF. Thus, the

importance of reinforcing the coordination between the BCCR and the MOF to improve the timeliness of MOF's data. External debt data is reconciled with IIP.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule

BOP data are preliminary when first released and are subject to revision. This revision cycle for BOP and IIP statistics follows a regular schedule, but it is not made known to the public. The revisions to external sector statistics during January and July of each year, are linked to the formulation and revision of the macroeconomic plan, which periodicity is well known to the public. However, there is no explicit information to the public on regular revisions. In case there is a large revision outside the regular cycle, the public is informed.

4.3.2 Preliminary and/or revised data are clearly identified

Users are informed about the preliminary nature of the data, by means of a footnote. As mentioned above, there is no explicit schedule for revisions, in part because these are done as the definitive information becomes available, and generally within the following quarters. There are no marks in the statistics indicating revisions because preliminary data are clearly indicated.

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

The BCCR keeps the policy that the factors that have contributed to the difference in the preliminary estimates are evaluated and explained to the authorities of the BCCR and to users who request for them. No formal procedure has been established for disseminating studies and analysis of revisions.

5. Accessibility

5.1 Data accessibility

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

The BCCR publishes in its website a full set of detailed time series of the BOP, external debt, and international investment position. Data from tables in the BCCR website can be exported to Excel files that include “macros” for automatic updates. In addition, the Internet site allows the subscription to e-mails for alerting users of recent updates and/or modifications of the statistical sets. Data are disseminated in millions of U.S. dollars. The breakdowns follow the standard components classification of the *BPM5*.

Data are disseminated for the following:

- Goods: exports and imports of goods.

- Services: exports and imports of services.
- Income: payments and receipts of labor and of capital income, both available on a gross basis.
- Current transfers: payments and receipts of current transfers to and from the government and other sectors.
- Direct investments (equity capital, reinvested earnings, other capital).
- Portfolio investment: transactions in foreign and Costa Rican securities with nonresidents, transactions in non-Costa Rican securities (breakdown by sector of the holder).
- Other investment: assets and liabilities of trade credits; government, banks, and others. In addition, loans and currency and deposits.

The statistics are also disseminated in a clear manner in the monthly, quarterly, and annual publications of the BCCR. Commentaries to the current period are included in the quarterly and annual publications as well as in the *Formulation and Revision of the Macroeconomic Program* of the BCCR.

5.1.2 Dissemination media and format are adequate

Within the website of the BCCR (http://www.bccr.fi.cr/flat/bccr_flat.htm), all statistical tables that can be downloaded by users contain a macro for automatic updates. In addition, the users can subscribe at no cost to receive e-mail alert notifications when statistical tables are updated by the BCCR. Historic series can be accessed from the data warehouse maintained by the BCCR, via web services, which is free to the public. The Statistical Bulletins can be downloaded from the same website.

5.1.3 Statistics are released on a preannounced schedule

In line with SDDS guidelines, a four-month ahead advance release calendar giving the precise release dates of its statistics, among which the balance of payments, is disseminated on the BCCR website (http://www.bccr.fi.cr/flat/bccr_flat.htm). The economic indicators' section contains a link to bring attention to the advance release calendar. The statistics are released on a timely basis.

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

The main channel of dissemination of statistics is through the Internet, thus external sector statistics in Costa Rica are made available to all interested users simultaneously.

5.1.5 Statistics not routinely disseminated are made available upon request

Nonpublished and nonconfidential data on the BOP, IIP are disseminated on request. Before dissemination it is checked whether the confidentiality of the data is secured. Customized tabulations can be provided, free of charge, to meet specific requests. These request can be made by telephone or e-mail communication. Questions that are directed to a common electronic address are forwarded to the AESE.

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 main page of the statistics website of the BCCR makes reference to the IMF Dissemination Standards Bulletin Board (DSBB), on which comprehensive information on the sources and methods can be found in the form of the SDDS metadata. These metadata are reviewed and updated quarterly. In addition, Costa Rica provides the IMF's STA a detailed methodological note on the compilation of BOP, which is published annually in the IMF publication, *Balance of Payments Statistics Yearbook*.

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

Different levels of data and metadata are made available to meet users' requirements. However, working papers or other specialized studies in external sector statistics have not been disseminated.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized

The BCCR provides assistance to users that require information on external sector indicators and statistics. Each set of statistical tables identifies names and e-mail addresses of officials in charge of particular areas of information to channel the questions to experts in each area.

The AESE receives a large amount of queries on BOP and external sector statistics in general that are responded to within 24 hours. The BCCR has assigned a contact person, who is in charge of channeling questions to the appropriate section in the BCCR. The assistance is provided in Spanish and English.

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

A detailed index of statistical publications is available on the BCCR website and updated each year. Hard copies of the same information are available, free of charge, in the Information Center of the BCCR.

Table 6. Costa Rica: Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics
(Compiling Agency: Central Bank of Costa Rica (BCCR))

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment			X			Its Organic Law does not specify the compilation activities of the BCCR. No mandate in the Organic Law to compile data from the nonfinancial private sector.
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				Insufficient coverage of services and transactions of the nonfinancial private sector. Insufficient coverage of compensation of employees.
2.2 Scope			X			
2.3 Classification/sectorization		X				Interest not recorded on an accrual basis and market prices not used in compiling FDI and other items in the goods account.
2.4 Basis for recording			X			
3. Accuracy and reliability						
3.1 Source data			X			Source data are incomplete to compile some services in the current account, financial transactions of the nonfinancial private sector, and remuneration of employees. No estimates are made for nonrecorded and border trade.
3.2 Assessment of source data		X				
3.3 Statistical techniques			X			No estimates are made for nonrecorded and border trade.
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies				X		No revision studies are carried out routinely.
4. Serviceability						
4.1 Periodicity and timeliness		X				No regular schedule on revisions is available to the user. Revision studies are not published.
4.2 Consistency		X				
4.3 Revision policy and practice			X			
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				