

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

This Report on the Observance of Standards and Codes on Data Module for Turkey was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on February 27, 2002. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Turkey or the Executive Board of the IMF.

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

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TURKEY

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

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## ACRONYMS

<i>1968 SNA</i>	<i>1968 System of National Accounts</i>
<i>1993 SNA</i>	<i>1993 System of National Accounts</i>
<i>1995 ESA</i>	<i>1995 European System of Accounts</i>
<i>BEC</i>	<i>Classification of Broad Economic Categories, United Nations, 1989</i>
<i>BIS</i>	Bank for International Settlements
<i>BPM4</i>	<i>Balance of Payments Manual</i> , fourth edition
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
<i>BRSA</i>	Banking Regulation and Supervision Agency
<i>CBRT</i>	Central Bank of the Republic of Turkey
<i>COFOG</i>	Classification of Functions of Government
<i>COICOP</i>	Classification of Individual Consumption by Purpose
<i>CPI</i>	Consumer Price Index
<i>DQAF</i>	Data Quality Assessment Framework
<i>ECB</i>	European Central Bank
<i>EU</i>	European Union
<i>FDI</i>	Foreign Direct Investment
<i>GDP</i>	Gross Domestic Product
<i>GFS</i>	Government Finance Statistics (IMF)
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics, 1986</i>
<i>GFSM 2001</i>	<i>Government Financial Statistics Manual, 2001</i>
<i>HICES</i>	Household Income and Consumption Expenditure Survey
<i>HBS</i>	Household Budget Survey
<i>ILO</i>	International Labor Organization
<i>IMF</i>	International Monetary Fund
<i>IIP</i>	International Investment Position
<i>ISIC</i>	<i>International Standard Industrial Classification of all Economic Activities</i>
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
<i>MOF</i>	Ministry of Finance
<i>NACE</i>	Standard Classification of Economic Activities of the European Communities
<i>ODCs</i>	Other Depository Corporations
<i>OECD</i>	Organization for Economic Cooperation and Development
<i>PPI</i>	Producer Price Index
<i>ROSC</i>	Report on Observance of Standards and Codes
<i>SDDS</i>	Special Data Dissemination Standard
<i>SIS</i>	State Institute of Statistics
<i>SITC</i>	<i>Standard International Trade Classification</i>
<i>SNA</i>	System of National Accounts
<i>SPO</i>	State Planning Organization
<i>Treasury</i>	The Undersecretariat of Treasury
<i>UN</i>	United Nations
<i>VAT</i>	Value Added Tax

## EXECUTIVE SUMMARY

This Report on Observance of Standards and Codes (ROSC) provides a review of Turkey's data dissemination practices against the IMF's Special Data Dissemination Standard (SDDS), complemented by an in-depth assessment of the quality of the national accounts, consumer and producer price indices, government finance, monetary, and balance of payments statistics. The agencies that produce these sets of statistics are the State Institute of Statistics (SIS), the Ministry of Finance (MOF), the State Planning Organization (SPO), the Undersecretariat of Treasury (Treasury), and the Central Bank of the Republic of Turkey (CBRT). This assessment was carried out by a mission from the Statistics Department that visited Ankara during October 18–30, 2001.

The mission concluded as follows:

- **SDDS observance:** Turkey subscribes to the SDDS. It meets the SDDS specifications for the coverage, periodicity, and timeliness of all data categories, and for the dissemination of Advance Release Calendars, with the exception of the periodicity and timeliness for wage and earnings data, and on timeliness for the analytical accounts of the banking sector, where Turkey is taking its entitled flexibility options.
- **Prerequisites of quality:** Turkish statistical agencies in the main have a legal and institutional framework that supports statistical quality. Agencies demonstrate an awareness of quality as the cornerstone of statistical work.

However, responsibility for the compilation and dissemination of government finance statistics is at present diffused amongst a number of agencies. Similarly, accounting standards are not uniform across the fiscal compiling agencies, further complicating the construction of the broader fiscal aggregates. The authorities intend to address these issues through a proposed Public Finance Management Law, expected to be put to Parliament by June 2002.

Coordination between, and within, some of the agencies compiling related sets of statistics is ad hoc and in some cases limited. Formalization of these interrelationships between and within agencies through further protocols and regularly-scheduled committee meetings could help refine the overall consistency of Turkish economic statistics and enable the authorities to maximize the use of the statistics that they have available. Similarly, the Supreme Statistical Council, which at present meets only infrequently and on specific key statistical issues, could adopt a higher profile in guiding overall statistical development.

- **Integrity:** All agencies demonstrate professionalism, are transparent in their statistical practices and policies, and provide ethical guidelines to their staffs.
- **Methodological soundness:** Turkey's consumer and producer price indices, monetary data, and balance of payments data, broadly follow international standards, although

there are some issues of classification and of valuation in monetary and balance of payments data. Foreign currency deposits of Turkish citizens abroad, and foreign currency reserve requirement placements at the CBRT still need to be fully identified as contingent liabilities in the IMF's template on foreign reserves and international liquidity. National accounts data are broadly in line with the *1968 System of National Accounts (1968 SNA)* rather than the *1993 System of National Accounts (1993 SNA)*. On the fiscal side, while budgetary data are generally methodologically sound, the nonbudget sector falls short of international requirements for classification detail. These deficiencies mean that only budget sector data are useable for fiscal analysis.

- **Accuracy and reliability:** Turkish macroeconomic statistics are broadly accurate and reliable, although the national accounts are affected by the lack of recent updating of benchmarks and of the base year for constant prices, and of incorporation of data of surveys that become available after more than one year. Lack of common accounting standards for its various components undermines the accuracy and reliability of the nonbudget fiscal data. More complete source data for some services and direct investment transactions would improve the balance of payments statistics.
- **Serviceability:** In general, Turkish statistics are timely and relevant. Macroeconomic statistics appear to broadly meet users' needs, as indicated by the results of the users' survey. However, consistency checks between the various statistics could be undertaken on a more formal and regular basis. Fiscal data on the nonbudget sector should be compiled on the same time frame as are budget data.
- **Accessibility:** Most metadata and statistics are widely available in various forms, including on the Internet, although less information is disseminated on the fiscal accounts. Responsible officials in the statistics-compiling agencies are identified, and respond to users' requests.

## I. INTRODUCTION

1. The data dissemination module of this Report on Observance of Standards and Codes (ROSC) provides a summary of Turkey's practices on the coverage, periodicity, and timeliness of the data categories specified in the IMF's SDDS, and of the practices on the provision of Advance Release Calendars for these categories. It is complemented by an assessment of the quality of national accounts, consumer and producer price indices, and government finance, monetary, and balance of payments statistics using the Data Quality Assessment Framework (DQAF) developed by the IMF's Statistics Department. This report is based on information provided prior to and during a staff mission from October 18–30, 2001,<sup>1</sup> as well as publicly available information.

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<sup>1</sup> The mission team was headed by Mr. Charles Enoch and included Messrs. Brian Donaghue, Rainer Koehler, Eduardo Valdivia-Velarde (all STA), Ms. Gylliane Gervais and Mr. John Sundgren (experts), and Ms. Paula Winchester (PDR—Administrative Assistant).

2. Section II includes an overview of the SDDS and an assessment of Turkey's data dissemination practices against the Standard. Section III presents a summary assessment of the quality of the principal macroeconomic datasets, following the dataset-specific assessment frameworks that were developed by the IMF's Statistics Department. Finally, Section IV sets out recommendations to achieve further improvements in Turkey's statistics.

## **II. DATA DISSEMINATION PRACTICES AND THE SPECIAL DATA DISSEMINATION STANDARD**

3. Turkey's data dissemination practices are assessed against the IMF's SDDS.<sup>2</sup> This is a "best practice" standard. It covers four sectors of the economy (real, fiscal, financial, and external) as well as population, and identifies four dimensions (data, access, integrity, and quality) of data dissemination. For each of these dimensions, the Standard prescribes two to four elements or good practices that can be observed, or monitored, by users of statistics (see Appendix I of Volume III). The IMF's monitoring of the Standard, as authorized by the IMF's Board of Executive Directors, is limited to the dimensions of data (coverage, periodicity, and timeliness) and access (Advance Release Calendar). The SDDS is a disclosure standard; that is, it focuses on encouraging the authorities to provide information to users, including information that will enable users to assess the data. The SDDS itself does not aim to assess the quality of data for any specific or predetermined use.

4. Turkey has subscribed to the SDDS since August 9, 1996 and started posting its metadata on the IMF's Dissemination Standards Bulletin Board on September 16, 1996. Turkey has been in observance of the SDDS specifications for the coverage, periodicity, and timeliness of the data, and for the dissemination of Advance Release Calendars, since July 20, 2001. The National Summary Data Page and the Data Template on International Reserves and Foreign Currency Liquidity were hyperlinked to the IMF's Dissemination Standards Bulletin Board on June 5, 1997 and June 9, 2000, respectively.

5. The institutions responsible for the compilation and dissemination of the SDDS data categories are the State Institute of Statistics (SIS), the Ministry of Finance (MOF), the State Planning Organization (SPO), the Undersecretariat of Treasury (Treasury), and the Central Bank of the Republic of Turkey (CBRT). The SIS compiles and disseminates the national accounts, the manufacturing production index, price indices, labor market, merchandise trade, and population data. The SPO is responsible for data on general government operations. The MOF and the Treasury are responsible for data on operations of the (budgetary) central government, and the Treasury also provides data on central government debt. The CBRT has responsibility for data on the analytical accounts of the banking sector, the analytical accounts of the central bank, private sector debt, interest rates, exchange rates, balance of payments, the international investment position, and the template on international reserves and foreign currency liquidity. Information on share price indices is compiled by the Istanbul Stock Exchange and

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<sup>2</sup> A detailed description of the SDDS can be found on the IMF's Dissemination Standards Bulletin Board on the Internet at <http://dsbb.imf.org>.

redisseminated by the CBRT. The authorities provide access to these data through a variety of publication and internet websites:

- The State Institute of Statistics' website (<http://www.die.gov.tr>);
- The Ministry of Finance's website (<http://www.muhasebat.gov.tr>);
- The State Planning Organization's website (<http://www.dpt.gov.tr>)
- The Treasury's website (<http://www.treasury.gov.tr>).
- The Central Bank of the Republic of Turkey's website (<http://www.tcmb.gov.tr>)

#### **Data dimension: coverage, periodicity, and timeliness**

6. Table 1 compares Turkey's data dissemination practices with the data dimension (coverage, periodicity, and timeliness) of the SDDS. Turkey meets the specifications of the data dimension for all data categories, except for data on wages and earnings, and the analytical accounts of the banking sector. Turkey is taking its entitled flexibility options on periodicity and timeliness<sup>3</sup> for wages and earnings data, and on timeliness for the analytical accounts of the banking sector. Turkey also takes an entitled flexibility option on the Advance Release Calendar for merchandise trade and balance of payments.<sup>4</sup>

7. The periodicity and timeliness of the analytical accounts of the central bank, the balance of payments, international reserves, and domestic debt data, and the timeliness of national accounts, the Consumer Price Index (CPI) and the Producer Price Index (PPI), exceed those prescribed by the SDDS (see Table 1).

#### **Access dimension**

8. Advance Release Calendars giving at least one-quarter ahead notice of approximate release dates, and at least a one-week ahead notice of the precise release dates, are disseminated on the IMF's Dissemination Standards Bulletin Board website, as well as on the SIS's website at <http://www.die.gov.tr/turcat/sdds/sdds.htm>.

9. Data are released simultaneously to all interested parties, generally on the websites of the relevant agencies, and on Turkey's National Summary Data Page (<http://www.die.gov.tr/TURCAT/turcat.html>).

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<sup>3</sup> The SDDS allows subscribers the use of two flexibility options in recognition of differences in economic structures and institutional arrangements across countries, i.e., for up to two data categories, a subscriber may obtain exemption from the prescribed levels of periodicity and timeliness.

<sup>4</sup> For up to two data categories a subscriber may indicate why a specific release date is not possible or not viewed as described.

Table 1. Turkey: Overview of Current Practices Regarding Coverage, Periodicity, and Timeliness of Data Compared to the Special Data Dissemination Standard

SDDS Data Category	Coverage (meets SDDS requirement)	Periodicity		Timeliness		Comments
		SDDS	Turkey	SDDS	Turkey	
<b>Real Sector</b>						
National Accounts	Yes	Q	Q	Q	3M/2M	Three months after the end of the first and fourth quarters, and two months after the end of the second and third quarters (exceeds SDDS requirements).
Production index/indices	Yes	M	M	6W (M encouraged)	6W	
Forward looking indicators	Yes	M or Q	M	M or Q	3W	Encouraged category. Expected capacity utilization.
Employment Unemployment Wages/ Earnings	Yes Yes Yes	Q Q Q	Q Q biannually	Q Q Q	Q Q 12M	Preliminary results within a maximum of 12 months after the end of the reference period.
Consumer price index	Yes	M	M	M	3D	Timeliness exceeds SDDS requirement.
Producer price index	Yes	M	M	M	3D	Timeliness exceeds SDDS requirement.
<b>Fiscal Sector</b>						
General gov't operations	Yes	A	A	2Q	6M	
Central gov't operations	Yes	M	M	M	M	
Central government debt	Yes	Q	M/Q	Q	3W/3M	Relates to domestic and external debt, respectively. Timeliness and periodicity for domestic debt exceed SDDS requirements.
<b>Financial Sector</b>						
Analytical accounts of the banking sector	Yes	M	M	M	2M/3M	Two months after reference period, except December, January and February (three months).
Analytical accounts of the central bank	Yes	M	W	2W (W encouraged)	W	Exceeds requirements of the SDDS.
Interest rates	Yes	D	D	...	D	
Stock market	Yes	D	D	...	D	
<b>External Sector</b>						
Balance of payments	Yes	Q	M	Q	Q	Periodicity exceeds SDDS requirements.
International reserves	Yes	M (W recommended)	W	W	W	Periodicity exceeds SDDS requirements.
Reserves template	Yes	M	M	M	M	On basis of agreement specified in paragraph 30.
Merchandise trade	Yes	M	M	8W (4-6 W encouraged)	8W	
International investment position	(No) Transition period until Dec. 2001	A (Q recommended)		2Q (Q encouraged)		Plan is to disseminate the IIP with the prescribed timeliness no later than June 2002.
Exchange rates	Yes	D	D	...	D	
Addendum: Population	Yes	A	A	...	...	

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

### **Integrity dimension**

10. The SDDS required disclosure of the terms and conditions under which official statistics are compiled and disseminated in Turkey are available to the public on the website of the SIS in both Turkish and English. The main points of the law and decrees have been translated into English and published in a booklet by the SIS.

11. Practices on internal access prior to public release and ministerial commentary are disseminated on the Dissemination Standards Bulletin Board for the data categories to which they apply. SDDS data disseminated by the SIS and the CBRT are not provided to officials outside the respective agencies before their release to the public.<sup>5</sup> Data disseminated by the Treasury and the SPO are shared internally, and with the MOF, for data checking purposes, but are not passed outside those agencies before publication.

12. Data are released without ministerial commentary.

### **Quality dimension**

13. Summary methodology statements for all data categories have been provided to the IMF. For all categories, except the international investment position (for which the transition period is in effect until mid-2002), they have been posted on the Dissemination Standards Bulletin Board and are accessible at <http://dsbb.imf.org/summeth.htm>. Turkey's statistical agencies also disseminate component details and relevant data series that facilitate crosschecks and checks of reasonableness for all data categories, as prescribed by the Standard.

### **Monitoring of data**

14. In accordance with the Third Review of the Data Standard Initiatives, the IMF staff began monitoring subscribers' performance under the SDDS in July 2000. Monitoring is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of Advance Release Calendars.<sup>6</sup> Since Turkey came into observance, its dissemination practices

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<sup>5</sup> Statistical information can be provided under strict conditions to the State Minister responsible for the SIS only for information on request, before its release to the public, during the printing process of the press release. Metadata on the IMF's Data Standards Bulletin Board at the time of the mission described an earlier, less restrictive policy; this has since been corrected.

<sup>6</sup> Monitoring is carried out against the release dates stated in the Advance Release Calendars and the metadata, i.e., to verify not only that the data are released according to the calendar but also that the data disseminated correspond to the metadata posted on the Dissemination Standards Bulletin Board. Other elements of the SDDS are on a self-disclosure basis by subscribers, that is, the subscribers are asked to confirm on a quarterly basis that their descriptions of their practices are accurate.

have been in observance with the Standard's requirements, and the dissemination of data on the National Summary Data Page has been timely.

### III. SUMMARY ASSESSMENT OF DATA QUALITY

15. Interest in assessing the quality of data derives from the objectives of complementing the SDDS with a consideration of the quality of the data being disseminated and of focusing more closely on the quality of the data that underpin surveillance of countries' economic policies. Against this background, the Statistics Department of the IMF has developed a tool to provide a structure and a common language to assess data quality. The DQAF comprises a generic framework,<sup>7</sup> and a set of dataset-specific frameworks. The frameworks cover five dimensions of data quality—integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility—and a set of prerequisites.<sup>8</sup>

16. An assessment of six macroeconomic datasets (national accounts, consumer price index, producer price index, government finance, monetary, and the balance of payments statistics) was conducted using the frame of reference provided by the dataset-specific DQAF. The information resulting from the application of this framework to the Turkish statistical system is presented below, following the structure of the DQAF. Conclusions are also presented in the form of standardized summary tables in which the assessment of data practices is made on a qualitative basis, using a four-part scale (Tables 3.1–3.6, in Volume III).

17. Turkey's macroeconomic statistics and statistical base are adequate to conduct effective surveillance. Nevertheless, IMF staff identified shortcomings in some statistical practices that have the potential for detracting from the accurate and timely analysis of economic and financial developments and the formulation of appropriate policies.

#### Prerequisites of quality

*This category in the DQAF identifies conditions within the agency in charge of producing statistics that have an impact on data quality. The elements within the category refer to the legal and institutional environment, resources, and quality awareness.*

18. The SIS is the centralized agency responsible for the compilation and dissemination of the national accounts, the consumer price index, the producer price index, and various other statistics related to the economic, social and cultural activities of Turkey. Its responsibilities are clearly set out in the Statistics Law No. 53 of 1962 and subsequent legal

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<sup>7</sup> Information on data quality can be found at the IMF website on the “Data Quality Reference Site” (<http://dsbb.imf.org/dqrs.index.htm>).

<sup>8</sup> See also the Generic Framework set out in Appendix I of the accompanying Detailed Assessments volume to this report.

decrees. Statistical data confidentiality, which is one of the fundamental principles of official statistics, is set forth in Statistics Law No. 53. The SIS also is responsible for establishing the procedures to be followed by other agencies with regard to their major statistical work. Its legal and institutional environment is adequate to support the collection, processing and dissemination of statistics of good quality. Staff resources are adequate, but the available computing technology needs some upgrading, and the departments responsible for the national accounts and price statistics are under-equipped. Quality is a focus in the work of management and staff, as evidenced by the continuous review of current compilations and the various development programs initiated by a dedicated staff. There is some intention to adopt the Total Quality Management Program. Advisory boards composed of representatives from government, academia and the private sector frequently have provided guidance on data quality issues.

19. Government finance statistics are produced by three agencies: the **MOF**, the **Treasury**, and the **SPO**. Data sharing and coordination between the agencies is good, but the lack of clear responsibility for overall compilation and dissemination of statistics leads to a fragmented approach. This problem is to be addressed by a proposed Public Financial Management Law, which is expected to be presented to Parliament in June 2002. Staff and technological resources are adequate, but may need to be supplemented to meet the additional demands that will be entailed by the allocation of principal responsibility for the compilation and dissemination of government statistics to the MOF. Staff involved in compiling government finance statistics need substantial training in the GFS system set out in the *Government Financial Statistics Manual, 2001 (GFSM 2001)*.

20. The compilation and dissemination of monetary statistics and balance of payments statistics are the responsibility of the **CBRT** and are governed by the terms and conditions of the CBRT Law of 1970 (Law No. 1211), as amended by Law No. 4651 of April 25, 2001. The CBRT Law establishes that data are to be kept confidential and used for statistical purposes only. The Statistics Department of the CBRT is responsible for research on the statistical methodology, compilation, processing, and dissemination of monetary statistics and balance of payments statistics. Staffing is adequate to perform existing tasks, and staff qualifications are adequate. Staff turnover is not high. The Department is equipped with personal computers, which are LAN connected. Computer resources are adequate to perform existing tasks. In September of each year the CBRT undertakes a review of its resources in the context of budgetary planning for the following year. Managers and staff of the CBRT are sensitive to data quality, and conduct their work accordingly. Improvement of data quality is a focus in planning the forward working plan.

### **Integrity**

*Integrity identifies features that support firm adherence to objectivity in the collection, compilation, and dissemination of statistics so as to maintain users' confidence. Elements refer to the professionalism and ethical standards that should guide policies and practices, which should be reinforced by their transparency.*

21. Regarding **national accounts** and **price statistics**, the Statistics Law establishes the independence of SIS and provides for measures to ensure the professional integrity of the institution. International standards are referred to in the choice of source data and statistical methods. Professionalism is further promoted by requiring staff to undergo examination before qualifying for promotion. All staff receive formal training in the code of conduct to ensure that ethical standards are understood. The law on Public Servants is also an important ethical standard for the officials of the SIS. It regulates the rights, roles, and responsibilities of public servants as well as prohibitions. The rules governing the collection and dissemination of statistics are published in the Statistics Law and also summarized on the front page of the questionnaires used by the SIS.

22. The MOF, the Treasury, and the SPO compile **government finance statistics** on an impartial basis, and staff are free from political, or other, influences in choosing the most appropriate sources and methods. However, there are no formal published terms and conditions under which the statistics are collected, processed, and disseminated.

23. **Monetary and balance of payments statistics** are compiled on an impartial basis and staff are free to choose the most appropriate data sources and statistical techniques. The Code of Conduct for the Staff of the CBRT provides broad ethical guidelines for employees. The CBRT Law, which constitutes the base for the compilation and dissemination of monetary and balance of payments data, is available through the CBRT website. Major changes in methodology, source data, and statistical techniques are announced to the public on the CBRT website at the time the changes are introduced. Data are confidential until the issuance of the press release, which is made solely by the CBRT.

### **Methodological soundness**

*Methodological soundness refers to the application of international standards, guidelines, and agreed practices. Application of such standards, which are specific to the dataset, is indicative of the soundness of the data and fosters international comparability. Elements refer to the basic building blocks of concepts and definitions, scope, classification and sectorization, and basis for recording.*

24. The overall structure of the **national accounts** follows the previous international standard (1968 SNA). Implementation of the 1993 SNA/1995 ESA is under way. The scope of the accounts, the delimitation of the economy, the production and asset boundaries, and the classifications and the basis for recording are largely in accordance with the 1968 SNA. There are no accounts for the institutional sectors. Due to data limitations, work-in-progress in agriculture is recorded on the basis of harvested crops, and not all government-related transactions are recorded on an accrual basis.

25. The concepts and definition of the **CPI** follow the standards set by the 1993 SNA and by the International Labor Organization (ILO) Manual. The scope of the CPI covers expenditures of urban households, excluding those earning very high and very low incomes. Expenditures are classified according to Classification of Individual Consumption by

Purpose (COICOP). The market basket includes a representative list of 410 goods and services derived from the Household Income and Consumption Expenditure Survey (HICES) of 1994. Prices collected are transaction prices paid by consumers.

26. The PPI also is based on the System of National Accounts (SNA) concepts for recording and valuation of product prices and weights. For agricultural products, wholesale prices are used instead of farm gate prices and the index is therefore called the wholesale price index. The PPI covers all domestic activities, except services and activities in free trade zones and bonded warehouses (these activities will be included in the next revision). The classification of establishments and products is based on the *International Standard Industrial Classification of All Economic Activities, Rev. 3 (ISIC, Rev. 3)* and the *Classification of Products by Activity*. Separate indices are provided for private and public corporations. Stage of processing indices are not yet compiled, but they will be introduced in the next revision. Weights and prices are recorded at basic prices including Value Added Tax (VAT).

27. **Government finance statistics** are currently produced on an approximate *GFSM 1986* basis, although there are some departures from *GFSM 1986* classification standards and the nonbudget sector data falls well short of *GFSM 1986* requirements for classification detail. These deficiencies mean that only budget sector data are available for fiscal analysis. In the past, substantial quasi-fiscal activity ("duty losses") was carried out by public corporations, but not shown as a memorandum item in the statistics; more recently, the extent of such activities has diminished, and the "duty losses" are shown transparently.

28. The analytical framework used for compiling **monetary statistics** reflects concepts and definitions that are, in general, based on the IMF's draft *Guide to Money and Banking Statistics in International Financial Statistics*, of December 1984. Following the publication in September 2000 of the *Monetary and Financial Statistics Manual (MFSM)*, the CBRT intends to revise its procedures and formats for collection, compilation, and dissemination of monetary statistics to comply with the new methodology. This involves applying market prices to the valuation of financial assets and liabilities, recording financial derivatives transactions and securities repurchase agreements on-balance sheet, and incorporating accrued interest into the outstanding amount of the financial asset or liability. The separate identification of private nonfinancial corporations and households (including nonprofit institutions serving households), as well as financial derivatives, will also need to be introduced to comply with the new methodology. Flow data are currently not compiled for monetary statistics.

29. Turkey's **balance of payments statistics** are compiled in broad conformity with the conceptual framework of the *BPM5*, except that free trade zones located in Turkish territory are treated as nonresident. Sectorization of institutional units is consistent with *BPM5*. Nevertheless, the classification of balance of payments statistics is largely in line with *BPM4*. Transactions are recorded, where possible, at market prices and converted to U.S. dollars at the exchange rate prevailing on the day of transaction or, when appropriate, at the average exchange rates for the reference period, and where possible, valued on an accrual basis. Nevertheless, most services, interest, dividend, and profits are recorded on a cash basis.

30. Foreign currency deposits held with the CBRT by Turkish citizens residing abroad ("Dresdner deposits") are not yet adequately treated in Turkey's **template on international reserves and foreign currency liquidity** (reserve template). The CBRT includes the full amount of these deposits in the reserve template under official reserves assets, but only registers Dresdner deposits with an original maturity of one year or less as predetermined drains. Deposits with an original and remaining maturity of one year or less should be treated as short-term predetermined drains (classified under Section II of the reserve template), and deposits with a remaining maturity of more than one year should be treated as contingent liabilities (classified in Section III of the reserve template). The authorities have confirmed that they will adopt this approach by mid-2002. In addition, commercial banks' placements at the CBRT from reserve requirements denominated in foreign currency are included in the reserve template under official reserves assets. These placements should also be recorded as contingent liabilities (classified in Section III of the reserve template). The authorities have also agreed to adopt this approach in the near future.

#### **Accuracy and reliability**

*Accuracy and reliability identifies features that contribute to the goal that data portray reality. Elements refer to identified features of the source data, statistical techniques, and supporting assessments and validation.*

31. The source data for compiling the **national accounts** come from the extensive survey program of the SIS, supplemented with data from administrative, regulatory and other sources. However, the business register is not updated systematically and annual surveys are not timely. A major effort is under way to make better use of administrative data and, in cooperation with Eurostat, to improve the business register. The SIS conducts its own annual and quarterly surveys on government spending (for extra-budgetary and local governments). This may become redundant with the gradual improvement of government finance statistics (see below).

32. The **national accounts** are based on a system of periodic benchmarks carried forward on a set of quarterly and annual indicators. The current benchmark year is 1990. Constant value-added ratios have been applied since then to several activities. Estimation of value added for many sectors, and of household consumption in general, is carried out at a very high level of aggregation. As a result, deflation is also performed at a high level of aggregation, despite the availability of a wide range of timely price indices. The base year of estimates at constant prices is 1987. Estimates are not seasonally adjusted.

33. The **CPI** is compiled using sound procedures and methods, with 1994 as the base year. The weights and prices are obtained from comprehensive data sources. The HICES is based on a multistage probability sample of about 30,000 households, while the monthly CPI price survey collects about 90,000 prices on goods and services (including rent). The CPI market basket and weights are updated every seven years. A new HICES was started in 2001, but had to be discontinued because of the deepening crisis in the Turkish economy. The SIS plans to conduct the survey in 2002 and to change its design to a continuous survey based on a smaller sample. It is not yet clear whether the 2002 survey will be sufficiently large to

provide the new weights for the current CPI. Either the geographical coverage of the CPI will have to be reduced, or the revision postponed until three years of more comprehensive HICES data are available. The SIS is considering moving to chain linked indices in the next revision.

34. The **PPI** also is compiled using sound procedures and methods, with 1994 as the base year. The weights and prices are obtained from a comprehensive data collection program. As with the CPI, the PPI products and weights are updated on a seven-year cycle. As before, the staff plan to use the forthcoming revision of the same base for the PPI as for the CPI. Chain linked indices will be introduced at that time.

35. Detailed and timely **government finance statistics** are available for the budget sector. Source data collection for the nonbudget sector is very difficult because a variety of nonstandard accounting systems are used. Work is under way on the development of a common accounting standard, based on international standards, to simplify the process of collecting data, and to provide the necessary detail.

36. Source data for **monetary statistics** are derived from accounting records of the CBRT and banks, and based on complete reporting by deposit-taking financial institutions. The source data in principle capture the full range of financial instruments and economic sectors. The data collection system allows timely compilation of monetary statistics. Statistical techniques are automated. The CBRT does not calculate seasonally adjusted monetary data; however, it is examining methods recommended by Eurostat. Within the CBRT there are arrangements in place to ensure the smooth flow of information between the Accounting Department and the Statistics Department. The CBRT verifies that data reporting practices followed by the banks are consistent with the regulations and has systems and procedures in place to ensure quality in the compilation process. The quality of the collection and processing of statistics is monitored through crosschecks.

37. The data sources are broadly sufficient to compile major items of the **balance of payments statistics**. Based on regulations related to foreign exchange transactions, most of the financial account transactions of the balance of payments can be identified. However, some major transactions of inflows of services, income, and current transfers are not identified and/or properly classified, although banks' foreign exchange records are periodically reviewed to overcome, to the extent possible, problems of coverage and misclassification. Banks' foreign exchange records therefore need to be supplemented with estimation techniques and other sources.

### **Serviceability**

*Serviceability focuses on practical aspects of how well a dataset meet users' needs. Elements refer to the extent to which data are relevant, produced and disseminated in a timely fashion with appropriate periodicity, are consistent internally and with other datasets, and follow a predictable revisions policy.*

38. The **national accounts** are consistent internally and through time, timely (exceeding SDDS requirements), and revisions follow a regular schedule. However, the normal revision period is one year, which provides insufficient time to incorporate the results of some surveys. The statistical discrepancy varies between 0.5 percent to 1 percent in the annual GDP estimates at constant prices, and gets progressively larger in the other sets of estimates. The relevance of the program is gauged through an informal national accounts advisory committee, user surveys, and seminars.

39. The **CPI** and **PPI** appear to meet users' needs. The relevance of price statistics is monitored by advisory boards, representatives of the academia, and by Eurostat. They are published promptly and with sufficient detail on the third day of the month following the reference month. Timeliness exceeds SDDS requirements. Consistent time series are available back to 1987.

40. **Government finance statistics** on the budget sector are adequate to meets users' needs. There is little knowledge or use of broad-based government finance statistics, possibly because such data cannot be produced easily, or on a sufficiently timely basis. The deficit/surplus and financing figures are compiled on slightly different accounting bases. There is no systematic reconciliation between government finance statistics and related statistics produced in the financial institutions and balance of payments systems. Preliminary and revised data are not clearly identified.

41. Regarding **monetary statistics**, the analytical accounts of the central bank are disseminated within one week after the reference period, in line with the specifications of the SDDS. A flexibility option is being utilized for the two-month timeliness of the data on the analytical accounts of the banking sector. The central banks' and commercial banks' records for claims on, and liabilities to, show discrepancies, because of differences in the time of recording financial transactions. Main breaks and discontinuities in the time series are explained in detail in attached notes/footnotes. Consistency checks with government finance statistics and with balance of payments statistics are rarely conducted. Monthly data of the CBRT are final, whereas banks' monthly data are subject to revisions throughout the year, and become final the following year.

42. Turkey compiles and disseminates monthly **balance of payments statistics**, thereby exceeding the periodicity prescribed by the SDDS, with timeliness that meets SDDS requirements. International reserves, the template on international reserves and foreign currency liquidity, and merchandise trade data are compiled and disseminated with the periodicity and timeliness prescribed by the SDDS. Major revisions to balance of payments statistics are announced in the CBRT's website. There are limited reconciliation processes with other macroeconomic data.

### **Accessibility**

*Accessibility deals with the availability of information to users. Elements refer to the extent to which data and metadata are clear and easily available and to which assistance to the user is adequate to help them find and use the data.*

43. The **national accounts** are disseminated via a press release and electronic media simultaneously to all users on the date and time specified in the Advance Release Calendar. The press is not briefed in advance. The Advance Release Calendar for the coming year is posted on the SIS website in September and given in the press release. Data and metadata are made available in various formats. Nonpublished but nonconfidential data are available upon request. Prompt and knowledgeable assistance is provided to users.

44. The **CPI** and **PPI** are released on a pre-announced schedule and are made available to all users at the same time. The monthly CPI bulletin and the corresponding SIS website provide the all-item index and detail. User support services are provided for both programs.

45. Very detailed **government finance statistics** are published for the budget sector. In addition, less detailed statistics, incorporating data for the nonbudget sector, are published in a variety of documents relating to macroeconomic issues and to the budget planning process. However, there is no single place in which to find complete and comprehensive government finance data. Little information is disseminated to inform users of the conceptual basis of the statistics, the data sources used, or the methods employed to compile the statistics.

46. **Monetary statistics** are disseminated in hardcopy and in electronic format. Weekly provisional data are disseminated for the purpose of monitoring the basic balance sheet aggregates of the banking system. Monthly time series are also disseminated on the website of the CBRT. More detailed quarterly data are disseminated in the *Quarterly Bulletin*, which is available in the *Periodic Publication Section* of CBRT's official website. Monetary statistics are released according to an Advance Release Calendar that is posted on the CBRT's website. Data are released simultaneously to all interested users. Publications, documents, and other services are free of charge. Unpublished and nonconfidential data are made available upon request free of charge. Prompt and knowledgeable service is provided to users. Periodic publications are disseminated on the website of the CBRT.

47. The detailed and summary monthly **balance of payments** are released simultaneously to all interested parties on the CBRT's website and through hardcopy publications. Datasets are published with various levels of detail. Analysis of current period developments is included. An Advance Release Calendar that gives the no-later-than date for the next 12 months is disseminated. Summary methodologies and related metadata are regularly reviewed and updated. Publications, documents, and other services are free of charge. Nonpublished but nonconfidential data are available upon request. Prompt and knowledgeable service is provided to users.

Table 2. Data Quality Assessment Framework: Summary Presentation of Results

Element	National Accounts	Consumer Price Index	Producer Price Index	Government Finance Statistics	Monetary Statistics	Balance of Payments Statistics	Comments
<b>0. Prerequisites of quality</b>							
0.1 Legal and institutional environment	O	O	O	LNO	O	O	See paragraph 19
0.2 Resources	O	LO	O	O	O	O	See paragraph 18
0.3 Quality awareness	O	O	O	O	O	O	
<b>1. Integrity</b>							
1.1 Professionalism	O	O	O	O	O	O	
1.2 Transparency	O	O	O	LO	O	O	See paragraph 22
1.3 Ethical standards	O	O	O	O	O	O	
<b>2. Methodological soundness</b>							
2.1 Concepts and definitions	LO	O	LO	LO	O	O	See paragraphs 24, 26, and 27
2.2 Scope	LO	O	O	LNO	O	O	See paragraphs 24 and 27
2.3 Classification/sectorization	O	O	LO	O	LO	LO	See paragraphs 26, 28, and 29
2.4 Basis for recording	O	O	O	O	LO	LO	See paragraphs 28 and 29
<b>3. Accuracy and Reliability</b>							
3.1 Source data	LO	LO	LO	LO	O	O	See paragraphs 31, 33, 34, 35, and 37
3.2 Statistical techniques	LO	O	O	O	O	O	See paragraph 32
3.3 Assessment and validation of source data	O	O	O	O	O	O	
3.4. Assessment and validation of intermediate data and statistical outputs	LO	O	O	O	O	O	
3.5 Revision studies	N.A.	N.A.	N.A.	N.A.	O	O	
<b>4. Salientability</b>							
4.1 Relevance	O	O	O	LO	O	O	See paragraph 40
4.2 Timeliness and periodicity	O	O	O	O	LO	O	See paragraph 41
4.3 Consistency	O	O	O	LO	LO	LO	See paragraphs 40, 41, and 42
4.4 Revision policy and practice	LO	O	O	LO	O	O	See paragraphs 40 and 42
<b>5. Accessibility</b>							
5.1 Data accessibility	O	O	O	LO	O	O	See paragraph 45
5.2 Metadata accessibility	O	O	O	LNO	O	O	See paragraph 45
5.3 Assistance to users	O	O	O	O	O	O	

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

#### IV. STAFF RECOMMENDATIONS

Based on the results of the data quality assessment, discussions with the Turkish authorities in the respective statistics-compiling agencies, and responses from data users, the following measures are proposed to increase further Turkey's adherence to international statistical standards. While all the high priority actions listed below should be tackled with urgency, those regarding Government Finance Statistics needed to be addressed with the greatest immediacy.

##### Institutional Arrangements

###### *High priority*

- Reconstitute the Supreme Statistical Council on a more active basis than recently, meeting perhaps twice a year and assuming an overall monitoring role over the ad hoc committees that have been set up to advise on specific statistical issues.
- Identify overlaps and interactions between the various agencies, and within agencies, in the collection and compilation of statistics, and formalize relationships through protocols or committees that would meet according to a regular schedule.

##### National Accounts

###### *High priority*

- Rebase constant price estimates to 1996, and for the future rebase estimates more frequently or adopt chain volume indices.
- Introduce revisions to annual and quarterly estimates back to 1996 that are not dependent on the prospective implementation of 1995 *ESA*. Emphasis should be given to the following:
  - i) introduction of annual industrial survey results;
  - ii) modification of the commodity flow methodology;
  - iii) more detailed estimation and deflation of output and household consumption;
  - iv) more detailed deflation of trade in services, and inclusion of shuttle trade in exports of goods;
  - v) improvement in the estimation of selected aggregates (for instance, building construction, import duties).

###### *Other key recommendations*

- Eliminate single deflation to the extent possible, and replace by double deflation.
- Compile annual surveys, especially the industrial survey, on a more timely basis.

- Adopt a three or four year cycle of annual revisions. This would allow input from annual survey results (output and intermediate consumption) into the revision.
- Adopt a quadratic minimization technique for benchmarking of quarterly to annual estimates, where warranted, and seasonal adjustment of all quarterly national accounts estimates.
- Coordinate with the MOF on government finance statistics, to ensure consistency of data on a conceptual basis and avoid duplication of efforts.

### **Consumer Price Index**

#### *High priority*

- Strongly support the SIS staff plan to revise the index as soon as possible. The revision should be carried out already on the basis of the 2002 HICES results, even though this may necessitate a reduction in regional detail.
- Develop over the coming months, in collaboration with the CBRT and SPO, a core inflation CPI on a trial basis

#### *Other key recommendations*

- Support staff plan to introduce geometric means calculations of price averages and to use chain indexing with annual links for index calculation.
- Improve efficiency by enhancing personal computer capacity, particularly in regional offices.

### **Producer Price Index**

#### *High priority*

- Strongly support the SIS staff plan to revise and expand the weighting schemes for the PPI, including stage-of-processing indices. This should be undertaken in tandem with the CPI revision.

#### *Other key recommendations*

- Review and enhance procedures for the treatment of quality change and of unique or complex products.
- Support the SIS staff plan to introduce the same calculation methods as for the CPI.

## Government Finance Statistics

### *High priority*

- Clearly assign the responsibility and authority for collecting, processing, and disseminating government finance statistics to one agency.
- Extend the scope of sub-annual government finance statistics to cover general government.
- Develop standardized (accrual) accounting systems, and apply to all general government agencies.

### *Other key recommendations*

- Compile both annual and subannual government finance statistics (covering general government, and its main sub-sectors) based on *GFSM 2001*; document and make public the terms and conditions governing the collection, processing, and dissemination of these statistics and reconcile them with other macroeconomic statistics.
- Disseminate all fiscal data within a single (virtual) document.
- Fully implement GFS classification standards, especially with respect to loan guarantees and extra-budgetary revenue.

## Monetary Statistics

### *High priority*

- Adopt the guidelines of the *MFSM* on (i) sectorization of the economy; (ii) classification and valuation of financial assets and liabilities; (iii) treatment of financial derivatives; and (iv) accrual accounting.
- Improve timeliness of reporting of the analytical accounts of the banking sector to the level specified in the SDDS.
- Implement steps for the calculation of flows (transactions, revaluations arising from price and exchange rate changes, and other changes in the volume of assets).

### *Other key recommendations*

- Keep under review future developments of investment and development banks and mutual funds (especially Liquid Funds) in the financial system.

## **Balance of Payments**

### ***High priority***

- Compile and disseminate the monthly balance of payments and annual international investment position according to the classification recommended by *BPM5*.
- Provide advance notice of major changes in methodology, source data, and statistical techniques.
- Disseminate the data template on international reserves and foreign currency liquidity (reserve template), including (a) deposits held with the CBRT by Turkish citizens residing abroad (Dresdner deposits) with an original and remaining maturity of one year or less under “short-term predetermined drains;” and (b) Dresdner deposits with a remaining maturity of more than one year under “contingent liabilities.” In addition, record commercial banks’ deposits at the CBRT from reserve requirements denominated in foreign currency as “contingent liabilities.”
- Request additional information through domestic commercial banks from their customers, and conduct enterprise surveys to supplement available data based on banks’ foreign exchange records.

### ***Other key recommendations***

- Define goods according to the breakdown recommended by *BPM5*.
- Evaluate appropriate source data and estimation techniques to estimate transactions of free trade zones, goods procured at ports, financial derivatives, and income transactions based on accrual basis, and the c.i.f./f.o.b. factor for valuing imports.

INTERNATIONAL MONETARY FUND  
TURKEY

**Report on the Observance of Standards and Codes (ROSC) — Data Module  
Response by the Authorities**

February 27, 2002

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## B. Price Statistics (Consumer Price Index)

### Clarifications on the staff's assessment in the second paragraph of sub-section 3.2.1, Page 32

*"The revised CPI is expected to be launched in January 2004. It may provide less regional detail as the new continuous HICES is based on a smaller sample of households. However, with regard to statistical needs for the overall territory, the regional detail provided may be redundant, as both the regional and city indices show rather small differences in their current levels, reflecting increased integration of regional markets. The SIS plans to ask users if a reduced geographical breakdown of the CPI will satisfy their needs."*

Studies on the new CPI with 2004 reference period have already been initiated since the composition of goods and services and the weights of CPI, based on 1994, have become old. The continuous base (HICES) survey, in contrast to previous one, is based on a small sample size of 9,800 households. Although this sample size is sufficient to give estimation for whole Turkey, urban and rural area, data of three years (2002, 2003 and 2004) are needed to give estimation for representative cities and geographical regions.

In the new system, HICES data for 2002, 2003 and 2004 will be used to construct the chained Laspeyres Price Index based on 2004. Since the survey data for 2004 will be ready approximately in June 2005, the index results will be made public in January 2006 together with CPI numbers for 2002, 2003, 2004 and 2005. In order to reflect current weighting structure, weights will be examined every year and, if needed, will be updated.

## C. Government Finance Statistics

Turkish authorities also share the view of the IMF staff that the current system is weak in producing reliable data on the fiscal statistics for the entire public sector. However, Turkish authorities intend to eliminate this deficiency during the ongoing process of transition to the new GFS system. In this framework a working group on fiscal statistics could be formed by the participation of technical staff from the related agencies, namely MOF, Treasury, and the SPO. This working group could be coordinated by one of these institutions and work on consolidating the fiscal accounts of budgetary and extra-budgetary institutions. Also these accounts could be published in the websites of all these institutions.

\*\*\*

We are aware that good financial statistics should be based on good and developed accrual based accounting system. In this concept, a government accounting reform was begun by the MOF to move accrual based accounting system. It is expected that by the end of 2003 would complete the accounting reform program.

After completing public financial management and government accounting reforms, it is expected that all questions in the report would be answered.

#### **D. Monetary Statistics**

- a. Adopt the guidelines of the *MFSM* on (i) sectorization of the economy; (ii) classification and valuation of financial assets and liabilities; (iii) treatment of financial derivatives; and (iv) accrual accounting.**

As it was mentioned in the ROSC Data Module, current sector classifications are generally in line with the guidelines of the *MFSM*. However, there are some differences in terms of sector and sub-sector classifications (for example, the breakdown of household and non-profit institutions serving households are not available for non-financial corporations sector). In this regard, Statistics Department of the CBRT is reviewing sector classifications for harmonization with *MFSM*. Rearrangement of bank reporting forms in line with the guidelines of the *MFSM* will be the first step in this process and new structure of reporting forms is planned to be completed in the year 2002. Compilation and dissemination of data in this new format is expected to be completed in the year 2003 since it is a time consuming process for the banks and requires restructuring of banking data collection system.

The CBRT has started to implement market valuation for all securities in the CBRT accounting for the balance sheet of December 2002, as mentioned in part 2.4.1 of the DQAF.

As of February 2002, the Banking Regulation and Supervision Agency has issued a regulation requiring repurchase agreements to be treated as on-balance-sheet item as collateralized finance transactions, as mentioned in part 3.1.1. of the DQAF.

The BRSA changed the accounting legislation and banks' chart of accounts by issuing the "Regulation of the Accounting Practices." The regulation is being applied by the banks since February 1, 2002 for trial purposes and will be fully in effect as of July 1, 2002.

- b. Improve the timeliness of reporting of the analytical accounts of the banking sector to the level specified in the SDDS.**

The BRSA requires the banks (i) to prepare their accounting records in compliance with the regulations put into effect by the BRSA, as per Article 13 of the Banks Act; and (ii) to deliver their interim financial statements to be issued, as of the end of each month, within thirty days following the reference period to the BRSA and the Banks Association of Turkey, and as well as to publish the Official Gazette, within forty-five days following the reference period, those issued as of the end of months of March, June, and September.

However, it is not expected to fulfill the timeliness requirement of the SDDS for the analytical accounts of the banking sector in the short-term due to delays in year-end balance sheets of banks and on-going effects of restructuring in the banking system.

**c. Implement steps for the calculation of flows (transactions, revaluations arising from price and exchange rate changes, and other changes in the volume of assets).**

Compilation of flow data (on the basis of transactions, revaluations arising from price and exchange rate changes, and other changes in the volume of assets) will be implemented for the banking sector. A draft will be prepared for the coverage and methods of calculation of flow data, and pilot implementations will be tested with several banks until early 2003. A calendar for implementation will be prepared according to results of pilot tests.

**d. Keep under review future developments of investment and development banks and mutual funds (especially Liquid Funds) in the financial system.**

Reviewing the developments in other financial institutions such as investment and development banks, insurance companies, leasing companies, and mutual funds will be considered in the framework of a future possible compilation of Other Financial Corporations' Survey (OFCS), after the necessary rearrangements are finalized for the banking sector which were mentioned in the above paragraphs.

#### **E. Balance of Payments Statistics**

**a. Compile and disseminate the monthly balance of payments and annual international investment position according to the classification recommended by *BPM5*.**

January 2002 BOP report will be disseminated in conformity with the *BPM5* standard components together with the historical data prepared in the same format. International Investment Position as of 2001, which will be disseminated in 2002, will conform with the classification recommended in *BPM5*.

**b. Provide advance notice of major changes in methodology, source data, and statistical techniques.**

In the past, major changes were announced at the time the data subject to change is disseminated. Henceforth, great importance will be given to provide advance notice of major changes in methodology, source data, and statistical techniques.

**c. Disseminate the data template on international reserves and foreign currency liquidity (reserve template) including (a) deposits held with the CBRT by Turkish citizens residing abroad (Dresdner deposits) with an original and remaining maturity of one year or less under "short-term predetermined drains;" and (b) Dresdner deposits with a remaining maturity of more than one year under "contingent liabilities." In addition, record commercial banks' deposits at the CBRT from reserve requirements denominated in foreign currency as "contingent liabilities."**

The inclusions regarding the above data will be made by mid-2002.

d. Request additional information through domestic commercial banks from their customers, and conduct enterprise surveys to supplement available data based on banks' foreign exchange records.

e. Define goods according to the breakdown recommended by *BPM5*.

f. Evaluate appropriate source data and estimation techniques to estimate transactions of free trade zones, goods procured at ports, financial derivatives and income transactions based on accrual basis and the c.i.f./f.o.b. factor for valuing imports.

The studies already started to improve the compilation and recording of the above mentioned subjects. On these issues; cooperation with the related establishments will also be provided.

INTERNATIONAL MONETARY FUND

TURKEY

**Detailed Assessments using the Data Quality Assessment Framework**

Prepared by the Statistics Department

Approved by Carol S. Carson and Michael C. Deppler

February 27, 2002

This document contains a detailed assessment by dataset of the elements and indicators that underlie the data quality dimensions discussed in Report on the Observance of Standards and Codes (ROSC), Section III of the data module, and the generic framework used for the assessment of the quality of Turkey's data (Appendix).

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

The following detailed information on indicators of statistical practices in the areas of the national accounts, price, government finance, money and banking, and balance of payments statistics was gathered from publicly available documents and information provided by the Turkish officials. This information, which is organized along the lines of the generic DQAF, was used to prepare the summary assessment of data quality elements, based on a four-part scale of observance, shown in Volume One of this Report (Tables 2.1–2.6).

### **I. NATIONAL ACCOUNTS**

#### **0. Prerequisites of quality**

##### **0.1 Legal and institutional environment**

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

The existence of an official statistical agency dates back to 1926 in Turkey. A centralized statistical system was established in 1930. The former statistical agency was reorganized to become the State Institute of Statistics (SIS) under the Law on Statistics, Law No. 53, of June 1962. This Law has been supplemented by Decrees No's 219, 357 and 403 in 1984, 1989, and 1990, respectively. A revised statistical law is being prepared, with a view to making Turkey's statistical provisions fully consistent with Eurostat guidelines in line with Turkey's candidacy for European Union (EU) membership; the new law is expected to be enacted during 2002.

Under Decree No. 219, Article 2a, the responsibility of the SIS is to collect, assess, and publish all kinds of statistics related to the economic, social, and cultural activities of the country. The duties of the National Accounts Department are defined in Article 9a of that Decree.

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

As noted above, Turkey operates a centralized statistical system. The SIS has special protocols with other agencies. Article 6 of Decree No. 219 sets out the various departments of the SIS, covering the full range of statistics for which the SIS is responsible. Under Article 20, the SIS is responsible for establishing the procedures to be followed by other agencies with regard to their major statistical work, and to take necessary measures to avoid waste of resources and duplication and to ensure coordination. The SIS is responsible for consulting with related organizations and ensuring the required cooperation and coordination regarding its activities included under the field of activity of other organizations; it produces the forms for statistical reporting in the various areas that it covers. The Central Bank of the Republic of Turkey (CBRT) can collect data on its own authority as it is governed by a different law (see below). Other agencies may publish data specifically related to their fields

of activity with the agreement of the SIS. Advisory boards are in place in particular fields—for instance, the SIS works with the employment offices in each city on a labor statistics committee.

As regards foreign trade data, the SIS works together with the Undersecretariat of Customs to collect the data. The SIS analyses, and is responsible for disseminating, the data. There is no duplication of effort, as only a single set of data is produced.

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

Article 27 of the Law on Statistics states that the SIS is not allowed to disclose personal and private statistical information to any official or private authority, or to reveal or make public such information. Staff who violate these provisions are liable to imprisonment and a (nominal) fine. These penalties have been applied in accordance with Article 29 of the SIS Law.

Special aggregation rules have been developed to ensure that indirect disclosure of individual data does not occur when aggregations of data are presented. Staff review all data prepared for dissemination for possible indirect disclosure. Access to individual data is restricted to staff who require the information in the performance of their duties. Steps are taken to secure the premises of the data-producing agency, and computer systems are password protected to prevent unauthorized access to data.

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

According to Article 26 of Decree No. 219, the SIS is authorized to request the information it deems necessary from all public institutions and organizations, and real and legal entities. All public institutions and organizations, and real and legal entities must furnish the requested information accurately and in the format and time period determined by the SIS. The SIS is authorized to investigate the accuracy of the information furnished, and to request additional information and documents from those concerned. The Law also prescribes that noncompliance can result in imprisonment and a (nominal) fine. In practice, this provision is seldom applied, as serious efforts are made to create goodwill among data providers. In the case of households, penalties are never imposed. On the other hand, businesses that fail to provide the required information after repeated requests may be, and often are, prosecuted.

Major user surveys are carried out periodically (1996, 2001), and their results published (see 0.3.2). Views are solicited on the quality of statistics, the scope and relevance of the statistical program and user satisfaction. The next user survey will be conducted in cooperation with Eurostat in 2003.

## **0.2 Resources**

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

The SIS employs 3,197 staff, of whom 1,365 have university degrees. The National Accounts Department has a total staff of 59. The Department consists of 8 divisions (Production Accounts, with a staff of 14; Expenditure Accounts, staff 10, Income Accounts, staff 4; Sectoral Analysis, staff 7, in charge of the input-output table; Industrial Accounts, staff 7, also working on the input-output table; Satellite Accounts, staff 8; Research on Methodology and Sources of National Accounts, staff 4, working on the implementation of the *1993 System of National Accounts (1993 SNA)* and the *1995 European System of Accounts (1995 ESA)*; and Economic and Social indicators, staff 2, looking after data dissemination).

Management considers that staff resources at present are commensurate with operational needs. More resources might be needed for developmental work; but there is confidence that such needs will be met as they arise. In particular, developmental work to meet EU requirements—for instance, the adoption of the *1995 ESA*—would be expected to lead to the provision of further resources.

Decree No. 357 gives the SIS the authority to establish a revolving fund, of specified maximum size, for marketing statistical services and products. This provision also gives the SIS the authority to undertake projects with other agencies, and to employ staff on a contract basis working in these areas.

Computer resources are inadequate (45 PCs for a staff of 59, many of which need to be upgraded). Hardware and software are quite up to date, but statistical series are not kept in a time series database.

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

There are some bottlenecks in the compilation of annual business surveys or censuses (for instance, the results of the industrial census of 1998 have yet to be published), thus limiting their usefulness for the national accounts. In this case, too much time seems to be spent on carrying out, compiling and verifying a census of a large number of establishments (the threshold for inclusion in the annual industrial census is only 10 employees), at the expense of timeliness. On the other hand, sub-annual surveys and other occasional surveys or studies, such as the building census of 2000, are completed in a very timely fashion. Some regular surveys are conducted on sectors of lesser importance (for instance, a quarterly survey of nonprofit institutions serving households, accounting for less than one half of one percent of Gross Domestic Product (GDP)). And although the data of the annual business surveys may not be published, provisional results are provided on request to the National Accounts Department.

In the national accounts, some statistics are not fully utilized. For instance, there is no double deflation of the production account, despite the availability of data on intermediate

consumption in several surveys and of a wide range of detailed, reliable and timely price indexes.

### **0.3     *Quality awareness***

#### **0.3.1     *Processes are in place to focus on quality***

Management is sensitive to issues regarding the quality of statistics. The President of the SIS disseminates his vision on the website. Staff meetings are held to discuss managers' visions and strategies.

There is at present no formal quality program, but concern for quality is ever present; a working group has been established to work on the Eurostat quality declaration; there is some intention to adopt the Total Quality Management Program.

Popular awareness of statistics is fostered by the designation of May 9 as Statistics Day.

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

According to Article 18 of Decree No. 219, a Supreme Statistical Council was established to provide high-level strategic advice on statistical data. The Supreme Statistical Council includes representatives of the State Planning Organization (SPO), public agencies and institutions, state economic enterprises, universities, chambers of commerce, trade unions, and private agencies and institutions. Although the Decree stipulated that the Supreme Statistical Council should meet at least once every two years, the Council does not seem at present to be very active. However, several advisory boards have been meeting on an ad hoc basis (on labor statistics, on census of population, and on the Household Income and Consumption Expenditure Survey (HICES)). In early 2001, the National Accounts Department of the SIS organized a seminar on the implementation of the 1993 SNA/1995 ESA with experts and key users from policy ministries, the CBRT, the private sector and academia.

Since 1990, the SIS organizes in November each year an Annual Research Symposium focusing on methodology issues and statistical techniques, to which employees, academics and other experts from Turkey are invited to present papers. Foreign speakers might be invited for some special sessions.

The SIS also assists in organizing the biennial National Statistics Congress, in cooperation with the Turkish Statistical Association and the Association of Statistics Graduates. The first congress was held in 1999, the second in 2001 and the next one is scheduled for April 2003.

Major user surveys are carried out periodically, and their results published. The last such undertaking took place in 2001, on the occasion of the 75<sup>th</sup> anniversary of SIS. It consisted of a survey of key users from both the private and public sectors, an employee opinion survey

and the interviewing of a group of children aged 9 to 13. Views were solicited on the quality of statistics, the scope and relevance of the statistical program and user satisfaction. The children were interviewed on their understanding of the importance of statistics. The next user survey will be conducted in cooperation with Eurostat in 2003.

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

The SIS is aware of tradeoffs in the production of statistics, especially in the context of the Institute's large demands deriving from the desire to meet EU statistical requirements.

There are no regular meetings with policy makers or other users in this respect. Emerging data needs are gauged through the user surveys, the Annual Research Symposium, the National Statistics Congress, the advisory boards and other ad hoc meetings with government officials. Emerging data needs are at present considered to be largely those to meet EU accession.

### **1. Integrity**

#### ***1.1 Professionalism***

##### ***1.1.1 Statistics are compiled on an impartial basis***

The national accounts are compiled on an impartial basis and there is no external pressure on the content or the release of the national accounts. The Law on Statistics (Law No. 53, of June 1962, later supplemented by Decrees No's 219, 357 and 403) guarantees the autonomy and integrity of the SIS. Public servants are bound by a code of conduct, spelled out in Law No. 657 of 1965, that includes penalties for disclosure of confidential data.

Professionalism is promoted and supported within the agency. Staff recruitment is through a competition that includes both written and oral examinations. Upon arrival at the agency, new recruits take a two-month training course during which the mission and responsibilities of the SIS are explained. In the past few years, the professional development of recruits has been further enhanced by giving them the opportunity to work in various departments of the SIS before being assigned to a permanent job. Finally, promotion to the expert level (the highest in the hierarchy below the managerial level) requires an oral and written examination and publication of a professional paper. Staff are also given the opportunity to take part in lectures, conferences and professional meetings.

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

The choice of statistical techniques is guided solely by considerations of a statistical nature, within the constraints of resource availability and response burden. Ad hoc surveys are often conducted in response to particular statistical needs. Cases in point are the building census

carried out in 2000 (after the devastating earthquakes in the Marmara region in the fall of 1999 and in time for the 2000 census of population) and the survey on the informal sector carried out in 2000 to help address a perceived undercoverage in the national accounts.

Methodological documents on the national accounts have been published, and the SIS sends a summary description of its methodologies to Eurostat, the Organization for Economic Cooperation and Development (OECD), and the IMF.

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

Under the Law on Statistics, the SIS has the authority to comment on misinterpretation and misuse of statistics. The national accounts staff routinely track references to national accounts data in the media, and the SIS requests clarification or correction when warranted.

**1.2 Transparency**

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

The Law on Statistics and all relevant decrees are public; they are available on the website of the SIS in both Turkish and English. All SIS survey forms make reference to the Law on Statistics and to data confidentiality. The SIS also clearly identifies how to obtain information about statistical products, through identifying a contact person, with their postal address, telephone number and e-mail, in the various dissemination media.

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

Quarterly national accounts are released to all users through a press release, on the website and on Turkey's National Summary Data Page, at 10:30 a.m. on the pre-announced release date. The information on quarterly national accounts can be provided under strict conditions to the State Minister responsible for the SIS, only for information on request before its release to the public, during the printing process of the press release. The public is made aware of this prior access on Turkey's metadata page on the IMF's Dissemination Standards Bulletin Board.

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

Data released to the public are identified as the product of the SIS. The name, logo and insignia of the agency appear in all publications, press releases and on the website. Likewise, national accounts data reproduced by other institutions, such as the CBRT, the SPO, or the Ministry of Finance (MOF), are always attributed to the SIS.

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

The SIS does provide notice of major changes in methodology and source data. However, in practice, few such changes have been made in the national accounts in recent years.

### **1.3 Ethical standards**

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

Apart from the provisions of the Statistics Act prohibiting, and imposing penalties for, disclosure of confidential information, staff conduct is guided by the Law on Public Servants, of which all civil servants are aware. New staff are made aware of the guidelines and the mission and traditions of the SIS when they join the agency and during the initial two-month training.

## **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 general framework for compiling the Turkish national accounts is the *1968 System of National Accounts (1968 SNA)*. However, certain parts of the estimates are already compiled on the basis of the *1993 SNA*, such as the estimation of consumption of fixed capital on a replacement cost basis, using the Perpetual Inventory Method. Plans have been made for the implementation of the *1993 SNA* and the *1995 ESA*, and some studies have already been carried out (for instance, a survey on the informal sector, a new and expanded input-output table for the year 1996 based on the *1993 SNA*, and the development of a tourism satellite account) and part of the staff is working full time on the implementation of the new standard. The SIS will receive some technical and financial assistance from the European Union (EU) in this regard, as well as for the update and redesign of the business register.

### **2.2 Scope**

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

The Turkish System of National Accounts is compiled on a regular basis, annually since 1968 (with rough estimates going back to 1923), and quarterly since 1987. The system encompasses the following elements:

- value added and GDP by activity, at current and constant prices (1987 = 100), annually and quarterly;

- expenditure on GDP at current and constant prices (1987 = 100), annually and quarterly;
- GDP by income component, annually and quarterly, released once a year;
- wages and salaries by activity, annually and quarterly, released once a year;
- occasional square input-output tables (1990, 1996; the latter has yet to be released);

The income and capital accounts for the total economy and institutional sectors are not compiled, and neither are the financial accounts.

The delimitation of the constituent units of the economy is in accordance with the *1968 SNA*. Territorial enclaves in the rest of the world are included. Sales by resident enterprises to duty-free zones are treated as exports of Turkey and, vice versa, purchases from the duty-free zones are treated as imports of Turkey, both in the national accounts and the balance of payments.

The production boundary is in accordance with the *1968 SNA*. In particular, own-account production of goods for own final consumption, output of goods for own-account fixed capital formation, and informal sector production (indirectly, through undercoverage adjustments in the 1990 benchmark year) are included. The inclusion of mineral exploration, production of literary or artistic originals, and of computer software, is envisaged with the implementation of the *1993 SNA*.

The asset boundary is also in agreement with the *1968 SNA*. The following additional items will come under the asset boundary with the implementation of the *1993 SNA*: defense assets that can be used for civilian purposes; valuables and historical monuments; mineral exploration; systems and computer software; and literary or artistic originals.

### **2.3 Classification/sectorization**

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

Institutional units and transactions are classified according to the *1968 SNA*, although there are no institutional sector accounts. The present national industry classification is based on the *International Standard Industrial Classification of All Economic Activities, (ISIC) Rev. 2*. The product classification employed for household consumption, machinery and equipment, and exports and imports (and thus in the 1990 input-output table) is the Classification of Broad Economic Categories, United Nations, 1989 (BEC), based on the Standard International Trade Classification (SITC), Rev. 3. Government activities are broken down according to a national classification reflecting purpose of activity. The implementation of *1995 ESA* over the next few years will lead to the adoption of the Standard Classification of Economic Activities of the European Communities (NACE), the Classification of Individual Consumption by Purposes (COICOP), and the Classification of Functions of Government (COFOG).

## **2.4 Basis for recording**

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

The valuation rules used for recording flows and stocks are in accordance with the 1968 SNA. Market output is valued at producer prices (including the value-added tax (VAT) in the 1990 input-output table, and excluding it in the 1996 table). Agricultural output for own-use is valued at equivalent market prices. Other nonmarket output (of government and nonprofit institutions, for instance) is valued at cost. The VAT is included in the valuation of intermediate consumption. Information on insurance and freight for merchandise imports is available. Detailed exports and imports are correctly valued.

### **2.4.2 Recording is done on an accrual basis**

Transactions are recorded in accordance with the 1968 SNA, as much as possible on an accrual basis. In principle, work-in-progress is recorded in the period it is produced, notably for residential construction. The exceptions are the rearing of cattle and cultivation of trees and orchards. Among government transactions, current consumption and capital formation are recorded on a cash basis, while indirect taxes are recorded on an "assessment basis," which is an approximation of accruals. Subsidies, in principle, are recorded on an accrual basis. In addition, since the government as a rule does not make large retroactive payments to employees, compensation data would be similar if they were recorded 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.

## **3. Accuracy and Reliability**

### **3.1 Source data**

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

A business register was established on the basis of an area enumeration in 1992, prior to the 1993 economic census. This register has not been updated in a centralized and systematic fashion. Survey divisions are responsible for updating their own master list, and practices vary depending on the availability of information. For instance, the list of state enterprises is regularly updated, and the Ministry of Industry supplies new registrations of large industrial establishments once a year, so that the annual census of these large establishments (covering all public corporations and private corporations with over ten employees in mining, manufacturing and energy) is fairly up to date. Likewise, there is an up-to-date list for hotels and businesses registered with the Ministry of Tourism. On the other hand, the registers used

for the quarterly industrial survey, the annual survey of trade and services, and of small manufacturing establishments, have been updated only in an ad hoc fashion since 1992, and there is no replacement in the samples of these surveys. Overall, since public corporations are important in the economy, and the employment threshold is very low for inclusion in the industrial census, the annual coverage of industrial statistics (mining, manufacturing and energy) is still good, as is the coverage of transport and communications.

The building census conducted in 2000 will form the basis for the area sample frame and the listing to be used in the 2003 economic census, to be supplemented by registrations supplied by the taxation authorities. The SIS has also embarked on a major project, with the assistance of Eurostat, to establish and maintain a comprehensive business register.

For agriculture, a census is carried out every ten years, and comprehensive data on production, sales and prices are collected by product and region through the extensive network of the Ministry of Agriculture. There are also fairly comprehensive statistics on fishing. Building construction is estimated on the basis of demand side data. The SIS collects information on building permits (value and area in square meters, by type of building) from all municipalities with a population of over 2,000, and from a sample of smaller ones. Most other construction activities (such as road building) are carried by the State or public corporations, for which direct information is available.

In the aggregate, the survey coverage is estimated to be over 80 percent for agriculture, fishing, mining, manufacturing, energy, communications, hotels and financial institutions. It is probably between 60 percent and 80 percent for transportation and construction, and below that for trade and personal and business services.

The SIS surveys rely on scientific random sampling (the "compromise allocation method" is used for surveys on small manufacturing, trade and services). Automated editing procedures of questionnaires are in place. Proper imputation methods are used to handle nonresponse, and blow-up factors are derived scientifically, based on sample design. However, the blow-up of the sample results is somewhat problematic in the absence of an up-to-date register, especially for trade and services. Data collected are sufficiently detailed to derive all key national accounts aggregates, namely output, intermediate consumption, fixed capital formation and changes in inventories. Inventory in quantity and value is collected only for mining and manufacturing.

Household surveys are comprehensive, covering both urban and rural areas and all socio-economic groups. They follow proper procedures with respect to sample design, edit and imputation procedures. Blow-up factors are derived scientifically, based on sample design. The Labor Force Survey is quarterly. The HICES is normally carried out at seven-year intervals, but the survey started in 2001 had to be interrupted, on account of the economic crisis. Data collected include purchases of consumption goods and durable goods, production for own-consumption, and purchases of valuables.

Comprehensive government finance statistics are available on a monthly and annual basis for the budgetary central government. The SIS collects data on extra-budgetary activities of the central government and conducts an annual survey of over 3,000 municipalities and special provincial administrations, representing 85 percent of the universe. It also conducts a smaller quarterly survey covering the same universe. However, the adoption of the Public Financial Management Law (see below) will provide an opportunity for government finance statistics to be compiled on a conceptually adequate basis (*GFS 2001* is consistent with *1993 SNA*) and to become more comprehensive and timely. The need for the SIS to collect data on extra-budgetary activities of the central government and on local governments would then disappear, freeing up resources. Detailed data are available to measure output, intermediate consumption, fixed capital formation and final consumption expenditure of government. As a rule, the classification of current versus capital expenditure poses no major problem.

In the absence of annual or sub-annual surveys, periodic censuses and occasional studies are undertaken. Decennial censuses are carried out for population (in years ending in zero), agriculture (in years ending in one) and business establishments (in years ending in three). Ad hoc studies are conducted in order to fill data gaps. Recent examples are the 2000 building census, the 2001 survey of the informal sector, and the 2001 survey on small manufacturing in the rural areas, carried out in order to establish a new benchmark year of the national accounts. Here again, census or sample design and estimation procedures rely on scientific techniques.

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

Generally, source data are consistent with the definitions, scope, and classifications of the national accounts, and in terms of the time of recording, reference periods, and valuation principles. Indirect taxes, for instance, are estimated on an assessment basis, a reasonable approximation of taxation accruals. The fiscal year of the State, and all establishments, is the calendar year, which tends to limit inconsistencies in the time of recording between the quarterly and the annual estimates. Annual questionnaires cover output, capital formation, and inventories, as well as intermediate consumption, in some detail. Compilers are well aware that concepts and definitions underlying source data may differ from those required by the national accounts, and make necessary adjustments.

### *3.1.3 Source data are timely*

Sub-annual surveys, annual and sub-annual administrative data, and all the other major statistics used in compilation of the quarterly accounts are timely. Quarterly production data are published 60 to 70 days after the reference quarter.

There is a lack of timeliness in annual surveys. As a result, many are simply not used in the compilation of annual national accounts. In practice, therefore, the national accounts' compilers rely on extensive, detailed and reliable monthly or quarterly data from surveys and administrative sources. On the production side, for most activities, only quarterly estimates

are compiled, and annual estimates are obtained by summation. To all intents and purposes, the annual estimation involves incorporating into the national accounts the annual data on the revenue and expenditure of government and public corporations, as well as any revisions to quarterly source data, which are generally quite small.

Table 1. GDP in Terms of Production

Activity	Main Estimation Method	Main Source
Agriculture	direct	good quarterly source data
Mining	direct	good quarterly sources for output
Manufacturing	direct	good quarterly sources for output
Energy	direct	good quarterly sources for output
Construction	indirect (demand side)	good quarterly sources for output
Trade	indirect (margin)	no quarterly source data
Hotels and Restaurants	direct and indirect	good annual sources for output of hotels, none for restaurants
Transportation	direct and indirect (margin)	good quarterly sources for output of rail and air, none for road
Communications	direct	good quarterly sources for output
Financial services	direct	good quarterly source data
Rent (paid and imputed)	indirect (demand side)	good quarterly sources for output
Personal and business services	indirect (overall estimate, analogous to a margin)	no quarterly source data
Government services	direct	good quarterly source data for central and local government
Import duties	direct	good quarterly source data

Since the estimation of household consumption and investment in machinery and equipment on the expenditure side of GDP relies on a commodity flow approach, it is carried out largely on a quarterly basis, with annual estimates obtained by summation. With a few exceptions (e.g., rent, energy, communications, and part of transportation), household consumption is calculated through a commodity flow approach in which the split between intermediate consumption and value added, as well as between intermediate and final

consumption expenditures by households with unincorporated businesses, is itself largely based on fixed coefficients, carried forward from the 1990 input-output table.

Table 2. GDP in Terms of Expenditure

Component	Main Estimation Method	Main Source
<b>Household consumption:</b>		
Food and beverages	commodity flow	no direct source
Durable goods	commodity flow	no direct source
Semi and nondurable goods	commodity flow	no direct source
Energy, transport & comm.	mostly direct	direct information is annual only
Services other than rent	commodity flow	no direct source
Rent (paid and imputed)	direct	good quarterly sources
<b>Government consumption</b>	<b>direct</b>	good quarterly source data for central and local government
<b>Gross fixed capital formation:</b>		
<b>Public sector:</b>		
Machinery and equipment	direct	good quarterly sources at current prices
Construction and public works	direct	good quarterly sources at current prices
<b>Private sector:</b>		
Machinery and equipment	commodity flow	no direct source
Construction	direct	good quarterly source data
Change in inventories	annual direct, quarterly indirect	Annual source data (mining, mfg.)
<b>Exports:</b>		
Goods	direct	good monthly data
Services	direct and indirect	as a whole, from BOP
<b>Imports:</b>		
Goods	direct	good monthly data
Services	direct and indirect	as a whole, from BOP

The significant proportion of indirect estimation does not in itself denote lesser reliability than would direct estimation. In the case of Turkey, the State and large (especially public) corporations account for a very significant share of output in many activities, and the coverage of these entities is excellent annually, and very good on a quarterly basis, especially for public sector establishments. While the lack of information on some extra-budgetary transactions is a problem for government finance statistics, the problem is less acute for government consumption and investment. The commodity flow approach probably yields fairly good results for machinery and equipment. However, the use of a commodity flow approach without information on inventory change, and the limited possibility to do

crosschecks, is problematic for the measurement of household consumption, especially in the absence of independently derived annual estimates.

### **3.2 Statistical techniques**

#### *3.2.1 Data compilation employs sound statistical techniques*

General procedures in survey divisions are sound. Computerized edits are performed to identify errors in the source data, and imputation techniques are used to account for nonresponse.

##### Production approach procedures

Output estimates are compiled at a sufficient level of industrial detail in the benchmark year (1990). In other years, estimates are prepared for about 30 economic activities, at the one- or two-digit level of the national industrial classification. In manufacturing, detailed estimates are calculated for large corporations, public and private. For small ones, estimates are made at the level of total manufacturing.

Estimates of intermediate consumption are compiled for the benchmark year at a sufficiently detailed level for most industries. However, fixed ratios (corresponding to the overall ratio of intermediate consumption to output at the one- or two-digit level) have been applied since 1990, in manufacturing and other activities. Use of fixed ratios that are more than five years old is likely to negatively affect the quality of value-added estimates.

Output of owner-occupied dwellings is valued correctly as the estimated rent that tenants would pay for similar accommodation. The benchmark estimate is correctly extrapolated as the product of the stock of dwellings times the increase in the rent.

Residential and nonresidential construction and output of large equipment are treated as work-in-progress. However, although annual construction estimates are correctly estimated, their quarterly distribution does not necessarily reflect work-in-progress within the year, in the absence of specific information. Growing crops and rearing of livestock are treated on a cash basis. Data on output and intermediate consumption in mining and manufacturing are adjusted for holding gains and losses on inventories.

The perpetual inventory method is the conceptual basis for estimating consumption of fixed capital for all types of assets.

Government expenditure, except subsidies, is valued on a cash basis. Resulting estimates do not necessarily differ markedly from accrued quarterly estimates, as the government never makes large retroactive payments on account of employee compensation. Indirect taxes are valued on an assessment basis, using estimates reported by the MOF. The assessment basis is intermediate between cash and accrual valuation. Subsidies are valued on an accrual basis.

Proper procedures are followed for compiling volume measures of GDP

Price indices are compiled at a detailed level and largely meet national accounts requirements with respect to concept, coverage, and reference period. However, volume measures of GDP are compiled at a fairly aggregated level, and the double-deflation method is not used. Instead, production indices/volume data are used to extrapolate value added in agriculture, mining, manufacturing, part of transportation, communications, financial services and the employee compensation portion within government services. Single deflation of value added is employed for communications, hotels and restaurants, and part of transportation. The volume indicator for personal and business services is the implicit overall growth rate of all other activities except those of government and nonprofit institutions. Volume measures of taxes/subsidies on products are estimated by applying base-year tax rates to the volume of transactions, subject to a specific tax/subsidy. Output volume of trade margins is estimated by applying the base-year margin rates to the corresponding volume of sales. The base year of constant price estimates is 1987.

#### Expenditure approach procedures

Among GDP expenditure components, government consumption and capital formation, private construction, inventory change, external trade and a portion of household consumption (rents, nonprofit institutions, most spending on energy, transportation and communications) are estimated independently. The rest of household consumption and private investment in machinery and equipment are derived using the commodity flow approach.

Household final consumption expenditure, external trade and investment in machinery and equipment are compiled according to the BEC, itself an aggregation of the SITC, Rev. 3. The BEC comprises some 20 categories, covering consumption and capital goods. Government final consumption expenditure is compiled according to a national classification reflecting main function, similar to COFOG. Gross fixed capital formation is compiled by activity and by type of asset. Change in inventories is compiled by type of inventory (raw material, work-in-progress, and finished goods), but only for mining and manufacturing. Inventory change is assumed to be zero in trade. Overall, the use of fixed ratios that are more than five years old is excessive, particularly as regards household consumption.

With respect to volume measurement, specific price indices/deflators are used to deflate expenditure on GDP components at least at the one-digit level of the corresponding classifications, except for exports and imports of services, deflated by the overall implicit deflators of corresponding transactions in goods. In some instances, volume measures are extrapolated and deflators are calculated implicitly. The household consumption implicit deflator is broadly consistent with the Consumer Price Index (CPI). Government final consumption expenditure is obtained by deflating cost components of output for final use (broken down into employee compensation and "goods and services"). Correct methods are used to derive volume measures of changes in inventories.

Any difference between the sum of quarterly estimates and the annual estimates is eliminated by prorating. However, the practice is not widespread at present. The application of an appropriate benchmarking technique (such as the Denton technique for reconciling quarterly and annual estimates) will become crucial when the new benchmark estimates are released and annual revisions are calculated back to 1990.

None of the series are seasonally adjusted.

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

Adjustments are made to source data when their underlying concepts are not consistent with national accounting principles. In addition, a systematic effort is made in the benchmark year to achieve an exhaustive measurement of GDP, including that resulting from informal and hidden legal activities. Adjustments follow a case-by-case approach using special studies conducted for the preparation of the benchmark estimates. Small manufacturing in urban areas and activities outside agriculture in rural areas are monitored through occasional surveys. A major new survey of the informal sector, combining a household survey and a business survey, has recently been completed and will be used in the elaboration of the new benchmark estimates. However, estimates of shuttle trade appearing in the BOP have not been included in the export figures recorded in GDP.

## ***3.3 Assessment and validation of source data***

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

Information is available about sampling errors where applicable, nonsampling errors (coverage, misclassification, measurement problems, nonresponse) are regularly reviewed, and adjustments and corrections made where warranted. High-value transactions are usually confirmed with respondents by post or by phone. The accuracy of administrative data and other secondary sources is routinely assessed, as is the accuracy of budgetary data, international trade, price statistics, and other sources used in compilation. Source data are also scrutinized for consistency with related data, and with national accounting concepts, definitions and classifications. They are not systematically analyzed in the context of revisions.

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

### *3.4.1 Main intermediate data are validated against other information where applicable*

Data compiled from the main data sources are validated against other independent data sources to the extent possible.

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

Not applicable.

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

The statistical discrepancy between GDP by activity and GDP by expenditure component is investigated. In this regard, however, the supply and use framework is of limited usefulness, as the estimates of supply and demand are not entirely independent. The discrepancy between GDP in terms of production and GDP in terms of expenditure is shown explicitly and allocated entirely to the expenditure side, on the assumption that the estimate of production is more reliable. No study has been made to detect bias in the GDP estimates over time.

## **3.5 Revision studies**

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

In practice, revisions are generally quite small, due to revision cycle of only one year, which does not provide time to incorporate results of major surveys. Systematic revision studies have not been undertaken on a regular basis until now (see also 4.4.3).

## **4. Serviceability**

### **4.1 Relevance**

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

Presently, user needs and the relevance of the statistical program are assessed through major user surveys carried out from time to time (1996, 2001, 2003), the Annual Research Symposium, the National Statistics Congress, the advisory committees and other ad hoc meetings with government officials (see also 0.3.2). The SIS is envisaging to formalize the existence of a national accounts advisory committee, to be composed of experts and key users from policy ministries, the CBRT, the private sector and academia.

A contact person is assigned to deal with requests or questions from users, and unpublished but nonconfidential information is made available on demand. Users are informed of this policy in the quarterly publication, the press release and on the SIS website. The SIS also sends participants to meetings and seminars of regional and international organizations that examine the content of statistical programs.

## **4.2 Timeliness and periodicity**

### **4.2.1 Timeliness follows dissemination standards**

The SIS meets or exceeds Special Data Dissemination Standard (SDDS) standards with respect to timeliness. Estimates for the first and fourth quarters are released 90 days after the reference quarter, and those for the second and third quarters, 60 days after.

### **4.2.2 Periodicity follows dissemination standards**

The SIS meets SDDS standards with respect to the periodicity of the GDP estimates. It publishes not only one, but two quarterly estimates of GDP at current and constant prices, through the production and expenditure approaches. Quarterly estimates through the income approach are also calculated, albeit only once a year.

## **4.3 Consistency**

### **4.3.1 Statistics are consistent within the dataset**

The guidelines spelled out in the *1968 SNA* are adhered to very closely and in a systematic fashion. The estimates of GDP by activity and by expenditure component are internally consistent from a conceptual standpoint. The statistical discrepancies between them are shown explicitly and assigned to the expenditure estimate. Historically, they are smallest in the annual estimates at constant prices (ranging between -0.5 percent and +0.5 percent), and get progressively larger in the other sets of estimates. The two sets of GDP estimates exhibit broadly consistent real growth rates, which is to be expected given that they are not derived totally independently.

GDP estimates at current prices, those at constant prices and the implicit deflators are consistent within the “value = volume × price” framework.

Quarterly and annual GDP estimates are consistent with one another from a conceptual standpoint. They are also quite close to one another prior to any proration to force the equality between them, as annual figures are obtained by summation to a large extent.

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

Consistent statistical series are available over a fairly long period of time, back to 1968 for the annual series, and to 1987 for the quarterly ones. When changes in source data, methodology or statistical techniques are introduced, historical series are reconstructed as far back as reasonably possible.

There are no significant breaks in the time series since the publication of the 1990 benchmark estimates, since the SIS avoids revising the series between benchmark years, other than to incorporate revisions to source data. Instead of regular annual revisions covering three or

four years, major methodological and procedural changes tend to be introduced in one go at the time of a major historical revision. This policy will be subject to review with the implementation of the 1995 ESA.

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

The external trade data in the GDP expenditure series are consistent with those shown in the balance of payments, with the exception of shuttle trade, included in the latter since 1996, but not in the former.

**4.4 Revision policy and practice**

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

The estimates of the first three quarters of the current year are revised at the time of the first estimation for the fourth quarter, and the estimates for all quarters of that same year are revised once more six months later. After that, as a rule, estimates for earlier years and quarters are not revised until a new benchmark year is estimated, every five to ten years. New source data tend to be incorporated at the time of major historical revisions, to avoid breaks in the series.

The present revision policy has been in effect since the early nineties. Users are familiar with the revision cycle, which has been quite stable from year to year. The revisions are usually of small magnitude.

The most recent major methodological document, *Gross National Product; Concepts, Sources, and Methods*, was published by the SIS in November 1994. It dealt with the historical revision carried out from 1991 to 1994, which saw the development of the new quarterly GDP series, the elaboration of the 1990 input-output table, the revision of annual estimates back to 1968, and the rebasing of constant prices estimates from 1968 to 1987.

**4.4.2 Preliminary data are clearly identified**

Preliminary and revised data are identified. Users are made aware that data are preliminary and subject to revision. The revised data are disseminated with the same level of detail as those previously published.

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

Revisions to the statistical series are mentioned in the press release and on the website.

## 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)

Estimates, growth rates and shares are displayed in the press release by (i) activity at the one-digit level (two-digit level for agriculture and manufacturing); and (ii) by major expenditure category, with additional detail for household consumption, government consumption, and capital formation, for the quarters of the current year, along with a short analytical commentary and graphs.

#### 5.1.2 Dissemination media and formats are adequate

Data are first released via the press release and through electronic means. Longer time series appear in several publications: the *Monthly Bulletin of Statistics* of the SIS, the *Main Economic Indicators* of the SPO (monthly) and the annual national accounts publication (last issue 1998), as well as on the SIS website and the SPO website. More detailed series are available on demand and a designated contact person in the national accounts handles all enquiries.

#### 5.1.3 Statistics are released on a pre-announced schedule

The Advance Release Calendar for the coming year is posted on the SIS website in September. A notice to this effect is published in the Monthly Bulletin of Statistics of the SIS. The release calendar is also given in each national accounts press release.

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

The statistical series are released simultaneously to all interested users on the date and time specified in the advance release calendar. The press is not briefed in advance. The statistical information can be provided under strict conditions to the State Minister responsible for the SIS, only for information on request before its release to the public, during the printing process of the press release. The public is informed of the practice on the IMF's Dissemination Standard Bulletin Board.

#### 5.1.5 Nonpublished (but nonconfidential) sub-aggregates are made available upon request

Nonpublished but nonconfidential detailed data are made available to users upon request. The availability of these nonpublished statistics is 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*

Documentation on national accounts concepts and methodology is published in SIS's *Gross National Product; Concepts, Sources, and Methods 1994*. The metadata page on national accounts and other SDDS categories, which contains a summary description of methodology, was posted on the IMF's Dissemination Standards Bulletin Board in September 1996. These summary methodologies and other related metadata are regularly reviewed and updated.

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

Metadata are available at different levels of detail.

## 5.3 *Assistance to users*

- 5.3.1 *Contact person for each subject field is publicized*

All statistical releases and publications indicate the mailing address, telephone and fax numbers, and e-mail address of (i) the Publications, Communications and Public Relations Division of the SIS and (ii) the specific divisions of the National Accounts Department that are responsible for the compilation of the statistics. A designated contact person in the national accounts handles all enquiries and de facto monitors assistance to users.

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

A catalogue of SIS publications was issued in 1994 and updated in 1999. Also beginning in 1999, the list of SIS publications is updated daily on the SIS website. The price of various statistical products is clearly disclosed and assistance is provided in placing orders.

## **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 statistics is clearly specified*

The existence of an official statistical agency dates back to 1926 in Turkey. A centralized statistical system was established in 1930. The former statistical agency was reorganized to become the SIS under the Law on Statistics, Law No. 53, of June 1962. This Law has been supplemented by Decrees No's 219, 357 and 403 in 1984, 1989, and 1990 respectively. A

revised statistical law is being prepared, with a view to making Turkey's statistical provisions fully consistent with Eurostat guidelines in line with Turkey's candidacy for EU membership; the new law is expected to be enacted during 2002.

Under Decree No. 219, Article 2a, the responsibility of the SIS is to collect, assess, and publish all kinds of statistics related to the economic, social, and cultural activities of the country. The duties of the Department of Labor Force, Services, Price Statistics, and Indices are defined in Article 7a of that Decree.

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

As noted above, Turkey operates a centralized statistical system. The SIS has special protocols with other agencies. Article 6 of Decree No. 219 sets out the various departments of the SIS, covering the full range of statistics for which the SIS is responsible. Under Article 20, the SIS is responsible for establishing the procedures to be followed by other agencies with regard to their major statistical work, and to take necessary measures to avoid waste of resources and avoid duplication and ensure coordination. The SIS is responsible for consulting with related organizations and ensuring the required cooperation and coordination regarding its activities included under the field of activity of other organizations; it produces the forms for statistical reporting in the various areas that it covers. The CBRT can collect data on its own authority as it is governed by a different law (see below). Other agencies may publish data specifically related to their fields of activity with the agreement of the SIS. Advisory committees are in place on particular fields—for instance, the SIS works with the employment offices in each city on a labor statistics committee.

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

Article 27 of the Law on Statistics states that the SIS is not allowed to disclose personal and private statistical information to any official or private authority, or to reveal or make public such information. Staff who violate these provisions are liable to imprisonment and a (nominal) fine. These penalties have been applied in accordance with Article 29 of the SIS Law.

Special aggregation rules have been developed to ensure that individual disclosure does not occur when aggregations of data are presented. Staff review all data prepared for dissemination for possible indirect disclosure of individual data. Access to individual data is restricted to staff who require the information in the performance of their duties. Steps are taken to secure the premises of the data-producing agency, and computer systems are password protected to prevent unauthorized access to data.

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

According to Article 26 of Decree No. 219, the SIS is authorized to request the information it deems necessary from all public institutions and organizations, and real and legal entities. All

public institutions and organizations, and real and legal entities must furnish the requested information accurately and in the format and time period determined by the SIS. The SIS is authorized to investigate the accuracy of the information furnished, and to request additional information and documents from those concerned. The Law also prescribes that noncompliance can result in imprisonment and a (nominal) fine. In practice, these penalties have not been applied for the CPI or the Producer Price Index (PPI), since noncompliance is relatively low. Overall, 81 establishments were fined in 2001 in connection with statistical surveys carried out by the SIS.

Major user surveys are carried out periodically (1996, 2001), and their results published. Also, SIS staff can be contacted through their website or by telephone, and respond to users' questions and requests. More extensive contacts are made in the event of major methodological revisions to the data. In harmony with EU requirements, the SIS plans to enter on its website questions on users' profiles, including their needs and their assessment of SIS services.

## **0.2 Resources**

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

The Price Statistics and Indices Division has an adequate number of staff for the compilation of the current CPI and PPI. It employs 37 persons (including 20 price collectors) in Ankara and 300 price collectors (including supervisors) in the field offices of the 34 other urban centers covered. Professional staff have an adequate educational background (at least a Bachelors degree) and, for promotion to senior positions, staff are required to pass an expert examination conducted by the SIS. Senior staff are very knowledgeable of CPI concepts, methods and best international practices. They are working with the EU statisticians on CPI harmonization, and also follow closely latest developments in the ongoing revision of the international guidelines on consumer and producer prices. All staff are provided manuals in compilation and price collection methods and practices and receive internal training in using these manuals. On-the-job training is continuously offered to resolve emerging data problems. Senior staff are encouraged to attend courses abroad to enhance their skills. By offering staff members a well-defined career stream, a competitive salary and opportunities to participate in international projects, the SIS has been able to retain a core contingent of expert staff.

At present, the computing power available to the Price Statistics and Indices Division includes 26 PC workstations at headquarters and 245 PCs at the regional offices (of which about 100 PCs are of insufficient capacity to be used for data entry and monitoring). The PCs in the regions are used also for the processing of data other than price data. If the Price Statistics and Indices Division, as suggested by the staff, moves in the near future to the compilation of chain indices for the CPI and PPI requiring annual revisions of weights, additional computer power also will be needed at headquarters, particularly to process the expenditure data extracted from the continuous HICSES to be introduced in 2002 (see below).

Despite the current crisis in the Turkish economy, financial resources for the compilation of the CPI and PPI have remained adequate. There are also additional resources available from Eurostat and the World Bank to improve the basic statistical structures of the SIS in the areas of information technology, basic registration, and expanded regional coverage in surveys.

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

The activities of the Department of Labor Force, Services, Price Statistics and Indices, and their budgetary implications, are reviewed each month against the targets of the SIS plan. After consultations with Division Chiefs, the Department Head sends each month a report to management, which tracks performance of staff against a critical path for each task within the divisions as well as the monthly use of budgetary allocations. The Finance Department of the SIS in turn regularly informs the other departments regarding budget developments and possible additional allocations from unspent resources. To minimize processing errors and improve the monitoring of price data, an enhanced data entry program and a program (including a data bank) that facilitates comparison of price movements between regions were introduced in 2001. The time spent by price collectors to obtain the monthly price data is measured and compared to standards set through surveys by experts in the field. There are plans to introduce, first in Ankara, hand-held computers for the collection of price data. Also, to improve efficiency and control, the staff of the Price Statistics and Indices Division intend to move the calculation of the CPI and PPI from the SIS mainframe computer to a high capacity PC workstation in the Price Statistics and Indices Division.

### **0.3 Quality awareness**

#### *0.3.1 Processes are in place to focus on quality*

Management is sensitive to issues regarding the quality of statistics. The President of the SIS disseminates his vision on the website. Staff meetings are held to discuss managers' visions and strategies. Staff of the Price Statistics and Indices Division have developed their own quality checking procedures, including crosschecking between datasets such as CPI, PPI and import price indices. They are, through training and the use of formal quality enhancement programs, well aware of the importance of maintaining high quality in the data they produce. The various stages of collecting, processing and disseminating the CPI and PPI have been under continuous review in recent years, spurred by plans for ambitious development programs in these areas.

There is at present no formal quality program, but quality is one element of the SIS's work with Eurostat; a working group has been established to work on the Eurostat quality declaration; there is some intention to adopt the Total Quality Management Program.

Popular awareness of statistics is fostered by the designation of May 9 as Statistics Day.

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

Users play a role in maintaining and improving the quality of the CPI and PPI. In addition to a large number of queries from the general public, advisory committees composed of representatives from government, academia and the private sector frequently have provided feedback and guidance on data quality issues. Six such committee meetings had been held in 2001 at the time the mission visited Ankara (October 2001). There is also an Annual Research Symposium, a National Statistics Congress, and user surveys.

In line with Article 18 of Decree No. 219, a Supreme Statistical Council was established to provide high-level strategic advice on statistical data. The Supreme Statistical Council includes authorized senior representatives of the SPO, public agencies and institutions, state economic enterprises, universities, chambers of commerce, trade unions, and private agencies and institutions. The Decree stipulated that the Supreme Statistical Council should meet at least once every two years. Although the Council does not seem at present to be very active, in the early 1990s it participated in the discussions of the revision plans for the CPI and PPI.

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

The tradeoff between timeliness and coverage of the CPI has been addressed by the use of efficient sampling techniques and by separating the compilations of the urban and rural CPIs. These measures have been accepted by users. Also, following recommendations by Eurostat, the International Labor Organization (ILO) and domestic users, primarily among the academia, as well as staff initiatives, the quality of the CPI and PPI is expected to improve further with the planned introduction of more advanced statistical techniques, such as the use of the chain index formula with annual links and geometric means for all price averaging, and the expansion of the consumer basket to include used cars, insurance services, computers and mobile telephones.

At the time of the last major revision of the CPI and PPI, the Supreme Statistical Council was consulted.

**1. Integrity**

**1.1 Professionalism**

*1.1.1 Statistics are compiled on an impartial basis*

The Statistics Law establishes the independence of SIS and provides for measures to ensure the professional integrity of the institution. In CPI and PPI compilations, staff decisions are based on internationally accepted standards and on professional judgment, with no interference from outside. For example, the government has not challenged the CPI data produced by the SIS, even when the data have shown unfavorable trends.

Professionalism is promoted within the SIS by requiring staff after three years of service to undergo an examination that, if passed successfully, will qualify them for an expert assistant position (the Price Statistics and Indices Division has four expert assistants). Staff are also encouraged to write papers on methodological issues for internal use, and to contribute to a new series of staff papers on recent research activities. These papers are discussed in staff meetings, and comments from academia are often sought. Papers have been produced in the area of seasonal adjustment and the compilation of a harmonized CPI, hedonic indices, and a CPI for minimum wage earners. In collaboration with the CBRT and the SPO, a report was prepared on how to calculate a core CPI for inflation targeting. Staff are required to report on international statistical meetings they have attended.

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

The Price Statistics and Indices Division 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 Turkey is thoroughly discussed among staff, and final decisions are made public in advance of implementation. For example, the new methodology to be used for the forthcoming HICES, which will provide new basket items and weights for the CPI, will be made public before the launching of the survey in 2002.

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

The practice of the Price Statistics and Indices Division is to draft a letter to the agency involved correcting the errors made. The letter is signed by the President of the SIS, and the agency, usually a newspaper, is asked to publish the letter. Also, to prevent misinterpretation, the President regularly invites journalists for briefings on new developments and data problems.

**1.2 Transparency**

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

The rules governing the collection, processing and dissemination of price statistics are set out in the Statistics Law. These rules also are summarized on the front page of the questionnaires used by the Price Statistics and Indices Division. The monthly CPI and PPI bulletins provide users who need further information with the name, telephone number and e-mail address of a contact person at the SIS.

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

There is no outside access to the CPI and PPI prior to their release.

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

All SIS publications are required to show the official SIS logo on the front page. In the case of joint publications, for example with the ILO in the case of labor force statistics and statistics on child labor, both logos appear on the front page. Price data reproduced by other agencies should be always attributed to the SIS.

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

Major changes in the CPI and PPI compilation systems are discussed in advance at advisory committee meetings on price statistics (see section 0.3.2).

### **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 outlined in the Public Service Law No. 657, the Statistics Law and various internal documents. During the first three months of employment at the SIS, staff are trained in the interpretation of these laws and in the ethical standards they are required to follow. They are also made aware of the penalties involved in breaking the laws. One of the duties of Division Chiefs is to regularly remind staff to maintain 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 of the CPI are generally in line with specifications recommended in the *1993 SNA*, the ILO Manual, and Eurostat regulations. The staff plan to include expenditure on second hand goods (primarily for used cars) in the next CPI basket, expected between 2002 and 2004. Eurostat recommendations also will be followed regarding the regional coverage of the CPI.

### **2.2 Scope**

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

The CPI covers the expenditure patterns of all urban resident households, except those earning very high or very low incomes. A rural CPI is also compiled, using the same methodology as for the urban, but it is not published; only a few interested users have access to the data. The CPI includes the market purchases of consumer goods and services (final

consumption expenditure) by resident households. Own-account production of market goods for final consumption are included in the rural CPI. Illegal market goods and services are excluded.

The CPI has been revised every seven years when new weights became available from the HICES. The latest revision was very thorough, including substantial changes and expansion in the weighting structure and the introduction of various new items. A detailed revision study was made available describing the weight update, changes in coverage, the sampling techniques used and other changes in methodology. Because of the observed substitution effect, which makes a revised CPI systematically lower than the previous index, the staff of the Price Statistics and Indices Division is exploring the introduction of a chain Laspeyres index with annual links in connection with the forthcoming revision of the CPI. This would require the establishment of a continuous HICES, which is also under consideration at the SIS.

### ***2.3 Classification/sectorization***

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

The index uses a HICES that follows SNA definitions for household units and consumption transactions. Household expenditures are classified according to COICOP.

### ***2.4 Basis for recording***

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

The goods and services in the basket are valued at market prices, including VAT. Product specifications are provided in detail so that price-determining characteristics for transactions at market prices can be defined.

#### ***2.4.2 Recording is done on an accrual basis***

Prices are recorded at the visit of price collectors. Fresh food items are priced once a week, while most other items are priced on the 10<sup>th</sup> and the 20<sup>th</sup> of the month.

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

Not applicable. Used goods are not included in the CPI.

### 3. Accuracy and reliability

#### 3.1 Source data

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

In the absence of comprehensive household sampling lists and a business register, the sampling frames chosen were the 1990 Population Census and for establishments the 1993 General Industrial and Establishment Census. In addition, the records of the Union of Chambers of Industry and Commodity Exchanges, and the expertise of regional price collectors, were used to update these sampling frames. The sample of retail and service establishments chosen from these sources was mainly based on the criterion that the establishments should have a large volume of sales, and be located in popular shopping areas.

The CPI consumer basket and weights were derived from the 1994 HICES, which normally is conducted on a seven-year cycle in order to incorporate major changes in the consumption pattern of households. It is representative for expenditures of practically all households in urban (20,000 people and above) areas. Detailed data are provided for seven regions and 19 major city centers. The HICES is based on a three-stage sampling design using probability-sampling techniques at each stage. The response to the survey was in general good; substitute households were found for nonrespondents. The sample included about 26,000 households. Data are also provided for household expenditure according to type of outlet (open market, supermarket, etc.), item varieties and seasonality for fruits and vegetable purchases. The weight of imputed rent was estimated on the basis of the market rent for equivalent rental units. From the HICES results, commodities representing 0.3 percent or more of total household expenditures were selected. Item varieties also were selected on the basis of their importance. The final basket thus includes 410 items and 747 varieties and their weights. Each item weight is further distributed by region and major urban center, shown separately, and by outlet type where applicable.

Prices for these items or varieties are collected each month through personal visits of about 300 price collectors. For fresh foods, prices are collected each week. Prices of most other items are collected around the 10<sup>th</sup> and 20<sup>th</sup> of each month. Rent data are obtained once a year in the month the rent contract began. Important price changes that occur between the 20<sup>th</sup> and the last day of the month also are recorded and included in CPI calculations. Item and variety specifications are sufficiently detailed to ensure consistent pricing from month-to-month. Price data are sent to headquarters via the Internet. The number of price quotations is about 90,000 each month. The total number of outlets covered is about 9,000 (including rental units).

In case of need to substitute complex items such as cars and refrigerators, ad hoc surveys are conducted to determine the effect on the price of the quality change observed in the new variety.

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

The HICES and CPI are closely coordinated so that the definitions, scope and classifications are the same. The few adjustments made to HICES data are on account of the underestimation of spending on alcohol, tobacco, and durable consumer goods. Production data are used to correct the expenditure data. The base year for both prices and expenditures is 1994.

### ***3.1.3 Source data are timely***

The 1994 HICES data became available in mid-1995, which facilitated the finalizing of the CPI consumer basket and its weights by the end of 1995. The new CPI was launched in January 1996.

## **3.2 Statistical techniques**

### ***3.2.1 Data compilation employs sound statistical techniques***

HICES expenditure data are provided in detail, including items, subgroups and major groups according to COICOP. Weights for owner-occupied dwellings are estimated at market rental values. Goods and services purchased are valued at the actual prices paid by households regardless of method of payment. Goods and services produced for own final consumption are not included for major cities because they are negligible in the urban households covered, but are included in the rural indices and are there valued at market prices.

A relatively complex aggregation technique is used to calculate the CPI. First, a weighted arithmetic average of the monthly price observations for each variety is computed at the city level using the weights for outlet types (for varieties such as fish that show large price differences geometric means are used). Second, a weighted average price for each item is computed from average variety prices using sales volumes as weights. Third, this price is then compared to the corresponding average item price for the base period to obtain the long-term price change for elementary series. Finally, the elementary indices are aggregated using the Laspeyres formula. For the calculation of the overall CPI for Turkey, a weight matrix is used, listing both item and regional/city weights. The indices for the 19 major cities are calculated separately. The current weight reference period and price reference period are 1994. When the new weights were introduced, the old index was linked to the new one using December 1993 as an overlap. Because of the current economic crisis, the next revision of the CPI has been postponed until the year 2002, when the first results of the new HICES are expected to become available. (The survey that was started in January 2001 had to be discontinued in April 2001.) The revised CPI is expected to be launched in January 2004. It may provide less regional detail as the new continuous HICES is based on a smaller sample of households. However, with regard to statistical needs for the overall territory, the regional detail provided may be redundant, as both the regional and city indices show rather small differences in their current levels, reflecting increased integration of regional markets. The

SIS plans to ask users if a reduced geographical breakdown of the CPI will satisfy their needs.

Temporarily missing prices are imputed based on price movements for similar items. However, seasonal items' prices are carried forward while their weights are shifted to similar items. For items that are permanently unavailable in a particular location, a replacement outlet that carries the same item is selected or a new variety that is similar in quality is selected. If there are quality differences between the items, an adjustment is made using the overlap price method. For some goods, the effect of quality change is eliminated on the basis of an analysis of differences in costs. New items are introduced in the market basket every seven years at the time of the CPI revision.

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

Detailed CPI components are provided to the National Accounts Division of the SIS for deflation of consumer expenditures. As the CPI does not cover very low-income groups, a separate CPI for minimum wage earners has been developed as a research project. However, in terms of household final consumption expenditure for the economy as a whole, the CPI coverage is close to 100 percent.

**3.3 *Assessment and validation of source data***

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

For the HICES, nonresponse is not an issue as substitute households were used. Sampling errors for the survey are made available. Problems of misclassification and under-coverage have been identified and solved internally. A post-enumeration survey, conducted by supervisors, helped to eliminate reporting errors. For the price survey, sampling errors are available for the outlet sample, which was derived from the 1993 General Industrial and Establishment Census, but not for the item and variety samples due to the judgmental nature of the selection. Administrative prices received from government agencies are crosschecked in the markets. Other price data are thoroughly checked and edited by computer programs and by supervisors at both regional offices and headquarters. Price collectors are instructed to report any unusual change to their supervisors.

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

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

The CPI data are regularly compared with comparable series from the PPI and the import price index.

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

Changes in the seasonality pattern of fresh foods and clothing are investigated but in general not accepted, as this would require an adjustment in the monthly weights. Prices for bread obtained from the bakers' union are checked against outlet prices and corrected when required. The same applies to gasoline prices collected from the government.

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

The monthly CPI is not revised once published. As the overall CPI for Turkey is calculated from the seven regional indices, there are no discrepancies between these aggregates. It should be mentioned, however, that an aggregate derived from the 19 city indices would not correspond to the Turkish CPI, as it would exclude the smaller urban centers included in the overall CPI.

### **3.5 Revision studies**

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

The CPI is final when first released and is not revised. However, revision studies are carried out by examining the weight updates, changes in coverage, sampling techniques used, and other changes in methodology.

## **4. Serviceability**

### **4.1 Relevance**

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

Users' needs in the area of price statistics are periodically monitored by the Supreme Statistical Council and by the advisory committees for the development of the CPI, PPI and HICES. A high priority is given to addressing the concerns of international users. International standards are immediately adopted and the staff of the Price Statistics and Indices Division regularly participate in meetings and seminars organized by Eurostat, the UN, the OECD, the ILO, the IMF, and the World Bank.

### **4.2 Timeliness and periodicity**

#### *4.2.1 Timeliness follows dissemination standards*

The CPI and PPI are published on the 3<sup>rd</sup> day of the month following the reference month, be it a working day or a holiday. Timeliness exceeds SDDS requirements. Major category,

region and city indices are published separately for the CPI in a monthly bulletin and on the SIS website. Detailed price data are published annually. The PPI bulletin presents data by major *ISIC* groups and subgroups (no regional data are supplied).

#### *4.2.2 Periodicity follows dissemination standards*

The CPI and PPI are published monthly according to dissemination standards.

### **4.3 Consistency**

#### *4.3.1 Statistics are consistent within the dataset*

The all items CPI and the aggregate of the regional CPIs are the same. Aggregate and component PPIs are also consistent.

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

As a result of linking the new CPI and PPI time series to previous versions, consistent time series are available back to 1987.

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

CPI and PPI data are broadly in line with national accounts deflators of production and household consumption. As mentioned before, the two are reconcilable, and both also are comparable to certain components of the import and export price indices.

### **4.4 Revision policy and practice**

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

Not applicable. After publication, monthly CPI and PPI data are never revised.

#### *4.4.2 Preliminary data are clearly identified*

Not applicable. After publication, monthly CPI and PPI data are never revised.

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

Not applicable.

## 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)

CPI data are presented for Turkey and separately for seven regions and 19 major cities. Details are also provided for the 10 major expenditure groups of COICOP and for 33 subgroups. Both index numbers and percent changes are provided, and monthly time series are shown back to 1996 for the overall index. The PPI bulletin provides an overall index and indices for public and private establishments with breakdowns on 4 major activity groups and 31 subgroups. Both the CPI and PPI presentations provide charts, but they do not include any comments on price developments. In general, table outlays are easily readable, although the four different ways of presenting percent changes may be confusing to some users. These data also appear on the SIS website. A printed catalogue listing SIS publications is available to users.

#### 5.1.2 Dissemination media and formats are adequate

The CPI and PPI are released on the 3<sup>rd</sup> of the month at 4.30 p.m. through a press release, which includes the monthly bulletins. At the same time, the data are entered on the SIS website.

#### 5.1.3 Statistics are released on a pre-announced schedule

The data release procedures referred to above are strictly adhered to. The official release date and hour are well known among the public. More detailed data and longer time series can be obtained upon request (for a fee). Until 4:00 p.m. on the 3<sup>rd</sup> of the month, the Price Statistics and Indices Division can revise the data. After the submission of the data to the President for his final approval and signature, copies of the press release and the bulletins are sent for printing to a locked room. At 4:30 p.m. they are given to the press, disseminated to users, and entered on the SIS website.

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

The CPI and PPI are released simultaneously to all users. No advance information is provided.

#### 5.1.5 Nonpublished (but nonconfidential) sub-aggregates are made available upon request

With the President's permission, tabulations of more detailed data than normally published can be obtained by users for a fee. Such requests are fairly common for both the CPI and PPI.

## **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 SIS published, with approximately a one-year lag, comprehensive papers on the methodology used in the 1994 revision of the CPI and PPI. The descriptions are given in both Turkish and English. Differences from international standards are documented in the few cases where they appear. Summary descriptions do not appear in the monthly bulletins.

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

The SIS publishes metadata on the IMF's Dissemination Standards Bulletin Board, in line with SDDS prescription.

## **5.3 Assistance to users**

- 5.3.1 Contact person for each subject field is publicized*

The CPI and PPI bulletins list the contact persons, and their telephone numbers and e-mail addresses, to whom users can turn with their queries and data requests.

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

A catalogue of SIS publications was issued in 1995 and updated in 1999. Also beginning in 1999, the list of SIS publications is updated daily on the SIS website. The price of various statistical products is clearly disclosed and assistance is provided in placing orders.

## **III. PRICE STATISTICS (PRODUCER PRICE INDEX)**

### **0. Prerequisites of quality**

See respective category in the Consumer Price Index section.

### **1. Integrity**

See respective category in the Consumer Price Index section.

## 2. Methodological soundness

### 2.1 Concepts and definitions

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

The PPI was developed using SNA concepts for recording and valuation of product prices and weights. Also, Eurostat and OECD recommendations have been followed in this area. The current PPI refers to output prices; input price and stage of processing indices are not calculated. However, for agriculture, wholesale prices are used instead of farm gate prices, and the index is therefore still called the wholesale price index. The staff plan in the forthcoming revision of the PPI to introduce separate indices for raw materials, intermediate goods and final goods, to publish separately the price index for agricultural products, and rename the index the Producer Price Index.

### 2.2 Scope

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

The PPI covers agriculture, mining, manufacturing and energy production. Business services are not covered, but an attempt will be made to include them in the next revision, if the new business register is available at that time. In principle, all market goods production for sale, including changes in output inventories, should be covered. However, as deviations from SNA, the PPI excludes free zones and bonded warehouses/factories, own-account production for final consumption (mainly agricultural products), and illegal market goods sold to willing buyers.

### 2.3 Classification/sectorization

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

The SNA is followed in the classification of institutional units and transactions. *ISIC, Rev. 3* is used for classification of industries and product groups down to the four-digit level; the classification of products and varieties is based on an additional four- to six-digit classification based on Classification of Products by Activity. In connection with the next revision, NACE will be used for the five- to seven-digit level and the new Eurostat classification for the seven- to eight-digit level and beyond. In addition, PPI data are provided separately for private and public establishments.

## **2.4 Basis for recording**

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

In accordance with the *1993 SNA*, weights and prices are valued at basic prices (ex-factory prices) including VAT. Intermediate consumption and transactions between units of the same enterprise are not recorded, but are being studied for possible inclusion in the next PPI revision.

### **2.4.2 Recording is done on an accrual basis**

The output data for finished goods used for weighting are recorded at the time they are sold.

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

Not applicable, as stage of processing indices are not yet calculated.

## **3. Accuracy and reliability**

### **3.1 Source data**

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

In the absence of a business register, the 1992 General Industrial and Establishment Census offered a base, which was updated with establishment data, provided by the Union of Chambers of Industry and Commodity Exchanges and by the Department of Agricultural and Industrial Statistics of the SIS. Especially the Union turned out to be a good source, as new establishments are required by law to register with it. For agricultural data, the Provincial Directorates of Agriculture also were used as a source. In future, the Price Statistics and Indices Division will also use the register of tax-paying establishments maintained by the MOF.

From these source data, sectors, subsectors, and product groups were determined according to the shares of each group in total product sales. The products with the largest share in domestic product sales were selected from these groups. These data provided the weights of the PPI.

For each product, the largest establishments were selected with the aim of reaching 80 percent coverage of products and activities. These establishments were surveyed during 1994 for the purpose of obtaining the major product varieties produced, monthly price data in 1994 for these varieties (base-year prices), and a description of the terms of transactions, sales volumes (for variety weights), and stocks.

For the regular monthly PPI, price data are collected for 678 commodities and 1,314 varieties from 1,287 establishments. For most product and activity groups, 80 percent coverage is obtained. A monthly form is used to collect by mail, fax or e-mail prices referring to the 5<sup>th</sup>, 15<sup>th</sup> and 25<sup>th</sup> of each month. The form is normally received at headquarters on the 26<sup>th</sup> of the month. There is little problem of nonresponse. Each month 5,176 price quotations enter the calculation of the PPI.

Annual surveys of industry are available at the SIS that could be used for developing annual weights. However, these survey results are produced with a one-year lag. Ad hoc surveys are conducted occasionally to select new establishments or varieties, and to verify the definitions used.

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

The source data used for weights and prices largely meet the definition, scope, classification, valuation and timing requirements of the PPI. The exception is agricultural prices, which are wholesale prices. All the other data refer to domestic market business transactions of the selected establishments at basic prices for the collection period.

### *3.1.3 Source data are timely*

The source weight data were received on time for developing the new PPI. The price data collected each month are promptly obtained for index compilation by the end of the reference month.

## **3.2 Statistical techniques**

### *3.2.1 Data compilation employs sound statistical techniques*

Indices are calculated at the four-digit level of *ISIC*. For each establishment, weighted product prices are calculated from variety prices. Long-term price relatives are derived by comparing current average product prices with base period prices. (Geometric means are not used.) The Laspeyres formula is then used to aggregate the product indices to industry level indices at the four-, three-, two-, and one-digit level of *ISIC*. Product weights are also split by type of establishment (private and public) to use for aggregation within each *ISIC* group. Both the weights and the base prices refer to 1994. When the new PPI was introduced in 1996, the previous index was linked to it by the use of linking factors for December 1993. However, the 1994 weights now have become outdated and a revision is due for 2002, based on the industrial statistics of the SIS. PPIs for agriculture and services may be developed separately.

Prices for temporarily missing products are estimated by imputing the price based on changes in similar product prices. For products or varieties that become permanently unavailable, a substitute product of similar characteristics is selected. If needed, quality adjustments are

made based either on the price overlap method or on cost differences when sufficient data are available.

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

The goods producing sector of the economy is relatively well covered by the PPI. The service industries are excluded. The special survey of the selected enterprises conducted through 1994 was crucial in improving the coverage, specifications, classifications and valuation of the data used.

**3.3 *Assessment and validation of source data***

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

Information on sampling errors is not available. There are few problems of nonresponse due to the close relationship established over the years with respondents. Large price changes are verified with respondents to ensure accuracy. SIS agents frequently visit the respondents to keep abreast of developments in the product sample and to collect other information. The PPI universe represents about 80 percent of total output, and the PPI establishments also represent about 80 percent of the PPI universe. Thus, the PPI sample covers about 64 percent of the economic activity.

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

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

The staff of the Price Statistics and Indices Division regularly compare PPI data with the comparable CPI, and with export and import price data.

**3.4.2 *Statistical discrepancies and other potential indicators of problems in intermediate data are investigated and available to guide users***

Unusual movements in the PPI are investigated. For example, the effect of oil price rises on other prices was recently investigated. They are usually not explained to the public. The PPI monthly bulletin does not provide any analysis of the data.

**3.4.3 *Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated and available to guide users***

The economic activity indices are derived from product indices, so there are no discrepancies in aggregates.

### **3.5 Revision studies**

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

The PPI has been revised every seven years in line with the CPI. The latest revision of 1994 was thorough and represented a substantial improvement over the previous PPI. However, the sampling frame was not complete, particularly for service establishments, as a comprehensive business register was not available at that time. Various studies are planned to improve the coverage and classification of the PPI.

### **4. Serviceability**

See respective category in the Consumer Price Index section.

### **5. Accessibility**

See respective category in the Consumer Price Index section.

## **IV. GOVERNMENT FINANCE STATISTICS**

### **0. Prerequisites of quality**

#### **0.1 Legal and institutional environment**

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

Three agencies are jointly responsible for collecting, processing, and disseminating government finance statistics.

Establishment Law No. 540, Article 23, gives the SPO authority to collect data required for compiling macroeconomic statistics, including government finance data for the public sector, necessary for the preparation of annual programs provided to the High Planning Council. These data are also included in budget documentation. For budget management and reporting purposes, the MOF is responsible for compiling revenue and expenditure data for the budget sector, and the Undersecretariat of Treasury (Treasury) is responsible for compiling financing data for the budget sector.

The MOF publishes monthly revenue and expenditure statistics for the budget sector. The Treasury adds financing statistics and republishes. The Treasury also publishes additional statistics that have been adjusted to eliminate hypothecated (i.e., earmarked) revenue and

expenditure items,<sup>1</sup> for which the matching transactions have not occurred. The Treasury is also responsible for providing government finance statistics to the IMF. The SPO publishes annual statistics for central government, general government, and the public sector.

In all cases the publication of government finance statistics is incidental to the other responsibilities of the agencies.

The fragmentation of responsibility for compiling and publishing government finance statistics, and for setting common public sector accounting standards, presents major problems in providing complete and timely government finance statistics.

This problem will be addressed by a proposed Public Financial Management Law, expected to be presented to Parliament in June 2002. This Law will assign clear responsibility to the MOF to compile and publish government finance statistics for the general government sector, and sub-sectors,<sup>2</sup> and provide the authority to the MOF to collect the necessary data. This authority will include the power to set accounting standards, in line with international standards, for all general government agencies.

However, it is recognized that an increase in the willingness of nonbudget government agencies to provide timely data, and in the capacity of human resources in the compiling agencies, will also be needed to take full advantage of the revised legal framework.

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

The MOF, the Treasury, and the SPO coordinate their activities and share data as required to carry out their responsibilities, and to avoid duplication of effort and increased respondent burden. There is also regular consultation between the agencies to reconcile differences.

The allocation of the principal responsibility for compiling and disseminating government finance statistics to the MOF does not imply that other agencies (e.g., Treasury) will not need to continue to compile part of the total set of data (e.g., fiscal and debt data). Continuing arrangements to coordinate and share data—including cross checks between ‘above the line’ and financing data, and between stock and flow data—should be continued, and preferably formalized in data sharing protocols.

#### *0.1.3 Respondents’ data are to be kept confidential and used for statistical purposes only*

Data from individual public corporations are kept confidential and used solely for the calculation of statistical aggregates.

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<sup>1</sup> These are “Other Special Revenues,” “Provision for Project Credits,” and “Special Revenues” on the revenue side, and “Special Allowances” on the expenditure side.

<sup>2</sup> Budget sector, central government, and local government.

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

Current arrangements do not give the MOF, the Treasury, or the SPO clear right of access to data for statistical compilation (as opposed to budget management and planning) purposes. It is envisaged that this deficiency will be addressed by the proposed Public Financial Management Law (see 0.1.1 above).

**0.2 Resources**

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

Existing staff resources are sufficient to carry out current responsibilities, but would not be sufficient to produce comprehensive government finance statistics on an IMF standard (GFS) basis. It is hoped that the introduction of standard charts of accounts, and the implementation of the SAY2000i system, will generate sufficient staff savings to allow the revised GFS system (defined in the IMF's *Government Finance Statistics Manual, 2001 (GFSM 2001)*) to be introduced, and applied at least to the general government sector.

Staff involved in compiling government finance statistics have a substantial need for training on the GFS system. Also, there are no measures in place in any of the agencies to encourage retention of trained GFS staff.

Computer, and other technology, resources are adequate for current needs.

It is essential that sufficient staff and technical resources are available to meet the additional demands that will be entailed by the allocation of principal responsibility for the compilation and dissemination of government finance statistics to the MOF.

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

There is no separate cost information on compilation of government finance statistics. The allocation of resources is part of the overall management process.

**0.3 Quality awareness**

**0.3.1 Processes are in place to focus on quality**

Statistical production is an integral part of normal agency operation. The focus is on the application of accounting rules, on which the statistics are based.

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

The Court of Accounts monitors aggregate budget government finance data against data from each accounting office at the end of the year.<sup>3</sup> The Treasury, SPO, and MOF, check the consistency between revenue, expenditure, and financing data on an ongoing basis.

Government finance statistics are based on local, unpublished, accounting standards. GFS is produced as a specialized ex-post derivative exercise for central government (excluding social security funds), and derivation data are provided.

The proposed Public Financial Management Law will mandate the application and publication of uniform accounting standards, in line with international standards.

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

The current system does not explicitly focus on quality issues as such, nor deal with tradeoffs between aspects of quality, notwithstanding the best efforts of the Treasury, SPO, and MOF to provide accurate and timely data.

A medium-term plan exists to improve data quality, and to address new and emerging data requirements.

The three major aspects of the plan are:

- 1) the introduction of the proposed Public Financial Management Law, which will allow the MOF to set standard accounting rules, and collect government finance data for all general government agencies in a more frequent and timely fashion;
- 2) the introduction of accrual accounting, and migration to *GFSM 2001*; and
- 3) the introduction of the SAY2000i computer system, which will allow rapid collection of data over the Internet from all accounting, and tax collection offices.

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<sup>3</sup> Except for the parliament and presidency.

## 1. Integrity

### 1.1 Professionalism

#### 1.1.1 Statistics are compiled on an impartial basis

Government finance statistics have traditionally been compiled and disseminated on an impartial basis. There are at present no laws, or formal safeguards, that establish the professional independence of the departments responsible for these statistics.

Staff involved in compiling government finance statistics need substantial training in the GFS system set out in *GFSM 2001*.

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

Staff of the MOF, the Treasury, and the SPO are, in practice, free from political, or other influence in choosing the most appropriate sources and methods for compiling government finance statistics.

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

Government finance statistics compilers can provide expert advice on technical aspects of the statistics and are allowed to respond publicly to misinterpretation of the statistics.

Explanatory material, to aid in the interpretation of the statistics, is provided only in exceptional circumstances.

## 1.2 Transparency

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

The compilation of government finance statistics is governed by laws and regulations related to the budgeting and planning process. There are presently no laws or regulations governing the dissemination of government finance statistics, which are provided as a voluntary public service. However, the proposed Public Financial Management Law will include clear requirements for the publication of statistics.

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

There is no internal government access to the statistics (apart from inter-agency data checking arrangements), nor any particular approval processes for publication.

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

Most government finance statistics are disseminated in agency-specific publications or websites. However, it is not always clear which agency was responsible for compiling the statistics, since the same statistics are repeated in several places, and some government finance statistics are disseminated in nonagency specific publications, such as budget papers and gazettes.

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

There have been no major changes in methodology, source data, or statistical techniques in the recent past. Nor have there been any breaks in the time series for the past ten years. The need for advance notice of such changes (which will result from the introduction of *GFSM 2001* in 2003) is acknowledged.

### **1.3 Ethical standards**

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

Staff are bound by the general rules applying to all public service staff, which are set out in Government Staff Code 657. There are no special guidelines for behavior of staff involved in compiling and disseminating government finance statistics.

## **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 standard government finance statistics are based on nationally developed concepts and definitions, which can, however, generally be related to the guidelines developed in the IMF's *Manual on Government Finance Statistics, 1986* (*GFSM 1986*).

A "migration path" to the standards defined in *GFSM 2001* is currently being developed. The first phase of this development encompasses only the budget sector, and excludes full accrual recording of nonfinancial assets. A pilot test of a new budget coding system, incorporating modified *GFSM 2001* codes (but excluding full accrual treatment of nonfinancial assets) for six units of the budget is planned for 2002. A further pilot test, for all budget sector agencies and selected other general government agencies, is expected to be carried out in 2003, with the new budget coding system being used in parallel with the old system, but the old system taking precedence for reporting. Full budget sector implementation of the new budget coding system is expected in 2004.

The extension of the modified *GFSM 2001* system to the whole of general government will be the next priority, followed by implementation of full accrual recording for nonfinancial assets.

## 2.2 *Scope*

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

Government finance statistics cover the whole of the general government sector, but nonbudgetary government finance statistics are only available annually, and with a significant time lag. Consolidated statistics are available for the general government sector, and its component subsectors (i.e., budget sector, central government, and local government).

Revolving funds are correctly included in general government statistics, but are incorrectly classified as separate institutional units, rather than being consolidated with their controlling agencies.

Data on quasi-fiscal activity by public corporations is compiled by the Treasury. The SPO also produces statistics for the whole public sector, which allows a consolidated view of the public sector to be provided, but only on an annual basis.

The full range of economic and functional statistics is available for the budget sector, except that information on Financing by Type of Debt Holder (*GFSM 1986*, Table D) is not available for tradable debt instruments.

Less detail, covering only broad economic type categories, is available for the nonbudget, and therefore general government, and public, sectors.

## 2.3 *Classification/sectorization*

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

The general government institutional sector is defined in accordance with *1993 SNA*. The subsectors of general government are defined in accordance with *GFSM 1986*.

Tax revenues received by the budget sector but earmarked for local governments are excluded from budget sector revenue, and classified as tax revenue of local governments. However, since the budget sector has, and in fact exercises,<sup>4</sup> discretion as to whether such

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<sup>4</sup> For example, amounts may be withheld by the MOF to reimburse the budget sector for loan and interest payments resulting from the “calling” of central government guarantees on local government borrowing.

amounts are passed on in full, it would be more appropriate to classify the whole amount as budget revenue, and record the amounts subsequently passed on as grants to local governments.

One consequence of the lack of timely data for the nonbudget sector is that full information on taxation revenue is not available in sub-annual data. Significant tax receipts are received by extra-budgetary funds, and then returned to the budget (sometimes referred to as tax "claw backs"). In some cases, however, although to a lesser extent than in the past, in the budget sector statistics these are shown as nontax revenue (i.e., transfers from other government agencies). While this is not necessarily technically incorrect, the budget data by themselves do not adequately reflect the source of revenue.

However, in some cases the budget sector exercises significant discretion over the transfer and recording of extra budgetary fund revenues. In these cases, the extra budgetary funds are acting in an agency capacity for the budget sector—in which case the revenues should be recorded as budget sector tax revenue as soon as they are received by the extra budgetary funds.

Expenditure transactions are defined in accordance with *GFSM 1986*, except that receipts from privatizations, other than those from the Privatization Administration agency, are classified as revenue, rather than (negative) lending minus repayments.

Loan guarantees are correctly classified as lending minus repayments when the guarantees are "called." However, in some cases in the recent past it was known that it was probable that such guarantees would be called when they were issued. In such cases, a lending transaction by the central government to the agency obtaining the guarantee should be recorded when the guarantee is issued, and repayments recorded when the loan is repaid by the borrowing agency, either to the original lender, or to central government in the case that the guarantee is called. Also, in some cases the period over which the loan is due to be repaid to government is very long,<sup>5</sup> and effectively a large part of the "loan" is unlikely ever to be repaid. This amount should be classified as a grant.

## **2.4 Basis for recording**

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

Generally only cash transactions, reflecting actual prices, are recorded in government finance data. Where transactions are recorded on a due for payment basis (see below), market valuation, or the nearest proxy, is used.

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<sup>5</sup> For example, in the case of Ankara municipality 940 months.

In accordance with *GFSM 1986*, debt liabilities are recorded at face value (i.e., the amount to be repaid at the end of the contract), rather than market value.

*2.4.2 Recording is done on an accrual basis*

Revenue is recorded on a cash basis.<sup>6</sup> Expenditure is recorded on a cash basis, including interest payments,<sup>7</sup> with the following exceptions:

- 1) Expenditure on goods and services is classified on a due for payment basis,<sup>8</sup> except that goods and services are not recorded (even if due for payment) unless they fit within budget allocations.
- 2) Wages and salaries paid in advance in respect of service to be provided in the following fiscal year<sup>9</sup> are not included in expenditure.

Budget financing transactions are on a strict cash basis.

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

Generally, government finance transactions are shown on a gross basis.

However, there is some netting of tax revenue to exclude amounts owed by general government to public corporations. As noted above, tax revenues received by the budget, but earmarked for local government, are excluded from budget revenue and shown as local government revenue. When the tax revenue of local governments is withheld by the MOF to

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<sup>6</sup> However, tax receivables data, based on assessment data, are also recorded in the system, and used to supply tax assessment data to the SIS for use in compilation of the national accounts.

<sup>7</sup> Accordingly, the increase in debt due to currency revaluation, which has the same economic effect as interest expense, is not included in the expenditure data. Although this is consistent with the 1986 standard, it substantially understates the true cost of foreign borrowing, and therefore supplementary information on the “cost” of revaluation should be included as a memorandum item to expenditure data.

<sup>8</sup> The difference between MOF due for payment expenditure and cash payments is shown as “deferred payments” in the reconciliation between the MOF deficit/surplus and Treasury financing data.

<sup>9</sup> The difference between cash payments of wages and salaries and MOF wages and salaries expenditure is shown as “advances” in the above reconciliation.

(partially) reimburse the budget for the cost of loan guarantees which have been called, this “saving” is apportioned between (negative) lending minus repayments, and interest received, in the budget data. However, the SPO takes these amounts into consideration in determining the revenue of local governments.

Tax refunds are generally correctly classified as (negative) revenue transactions, but tax rebates<sup>10</sup> are incorrectly classified as expenditure transactions.

### **3. Accuracy and reliability**

#### **3.1 Source data**

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

Timely and comprehensive budget revenue and expenditure data are available monthly from the budget management system. The Treasury compiles general government financing, and debt, data from its debt management system. Source data collection for other central government agencies is hampered by a lack of common accounting standards.

The MOF collects data for most revolving funds. Data for all other nonbudget agencies are collected by the SPO.

The SPO conducts an annual survey of local government agencies. The survey is fully enumerated for all municipalities with populations greater than 100,000, and uses a simple random sample for agencies with populations of 100,000 or less. After two years, the survey data are benchmarked against audited accounts published by the SIS.

Information is available to allow consolidation of data between subsectors of the public sector. However, manual intervention is required where transactions are recorded on a cash basis in one sub-sector and on an accrual basis in the other.

The proposed Public Financial Management Law will greatly simplify the collection of data by standardizing accounting standards, and will give the MOF responsibility for data collection for the whole of general government.

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<sup>10</sup> For example, VAT rebates on exports.

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

The budget and extra-budgetary charts of accounts do not align with *GFSM 1986* definitions, classifications, or time of recording. The scope and valuation do generally align with *GFSM 1986* standards.

Information published in budget and accountability documentation cannot easily be reconciled with government finance statistics.

**Classifications**

In general, there is a reasonably straightforward relationship between the *GFSM 1986* economic type classifications and definitions and the corresponding budget items, although clerical intervention is required to convert data to the *GFSM 1986* basis. However, the *GFSM 1986* functional classification is not easy to extract from the budget data.

It is difficult to generate government finance statistics even on an approximate *GFSM 1986* basis from the accounting systems used by nonbudget authorities, because the accounting systems are nonstandard, and because there is no systematic coding system used in these accounts, although in studies done by the SPO regarding the total public sector balance, the accounts are brought, to the extent possible, on to a cash basis by requesting accounts on a cash basis from relevant institutions.

The proposed Public Financial Management Law will allow charts of accounts to be defined which are compatible with *GFSM 2001* classifications and definitions, and will allow automatic generation of *GFSM 2001* categories from budget and accounting data, providing *GFSM 2001* classification codes are incorporated in the charts of accounts.

**Basis for recording**

A mixture of cash and accrual-based recording is used for government finance data.

The budget sector uses mainly cash-based recording (checks written, and checks and cash received). However, some items are also recorded on a due for payment in the budget system. Most extra-budgetary funds also use cash-based recording, but the social security funds use accrual-based recording. Revolving funds use commercial accrual recording. Local governments are mainly on a cash basis, but some water and sewerage agencies<sup>11</sup> use accrual recording.

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<sup>11</sup> These agencies should be further investigated to determine whether they are properly included in the general government sector, or should be re-classified to the public nonfinancial corporations sector.

Accrual accounting standards (in line with international standards) for the general government sector are currently being developed under an agreement (Programmatic Financial and Public Sector Adjustment Loan) with the World Bank. The proposed Public Financial Management Law (see 0.1.1 above) will also give the MOF the authority to set the revised accounting standards for all general government units.

### ***3.1.3 Source data are timely***

Timely budget data are available on a monthly basis. However data for the nonbudget sector are not available on a sufficiently timely basis for fiscal analysis. Most of these data are only available on an annual basis, with a significant time lag after the reference period.

## ***3.2 Statistical technique***

### ***3.2.1 Data compilation employs sound statistical techniques***

The survey of local government agencies conducted by the SPO is based on internationally accepted sampling principles. Otherwise, there are no sampling or data estimation processes used in compiling government finance statistics.

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

Other statistical procedures are not employed in compiling government finance data.

## ***3.3 Assessment and validation of source data***

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

The main validation of all government finance data is via the benchmarking of preliminary data to audited data for all agencies (including survey-based local government data). No special assessments are made of the relationship between preliminary and final data.

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

### ***3.4.1 Main intermediate data are validated against other information where applicable***

No validations of intermediate government finance data are carried out.

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

Not applicable.

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

Statistical discrepancies between the deficit/surplus and financing, and between financing and changes in gross debt, are investigated and resolved.

**3.5 Revision studies**

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

Rewvisions mainly result from the routine replacement of preliminary data by "final" audited data. No analyses are made of the revisions resulting from this process.

More rarely, final data are revised as a result of new data or re-interpretation of old data. In these cases an explanation is provided of the cause of the revision.

**4. Serviceability**

**4.1 Relevance**

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

Budget sector statistics, compiled on nonstandard country specific principles, are used within the government itself to monitor the impact of the budget sector on fiscal policy, and for fiscal analysis more generally. General government (and public sector) government finance statistics are mainly used for program development purposes, within the annual budget process. General government, and central government, statistics are not available with the timeliness or frequency required to monitor policy.

GFS are presently compiled solely for provision to the IMF, and are not used in determining or monitoring fiscal policy. Because GFS data have to be clerically recompiled from nonstandard data, they are not available until some time after the original data.

In general, users appear to be largely unaware of the potential uses of government finance statistics, and there is currently little demand for these statistics outside the government itself. In part, this may reflect the lack of complete and easily understandable government finance statistics.

**4.2 Timeliness and periodicity**

**4.2.1 Timeliness follows dissemination standards**

Timeliness of government finance statistics follows SDDS standards, viz:

- monthly central government budgetary operations statistics are published within one month after the reference period
- quarterly central government debt statistics are published within one-quarter after the reference period (within one month for domestic debt)
- general government annual operations statistics are published within two-quarters after the reference period.

#### *4.2.2 Periodicity follows dissemination standards*

Periodicity of government finance statistics follows SDDS standards, viz:

- central government budgetary operations statistics are published monthly and annually
- central government debt statistics are published quarterly (monthly for domestic debt)
- general government operations statistics are published annually

### **4.3 Consistency**

#### *4.3.1 Statistics are consistent within the dataset*

Government finance statistics are internally consistent, with the exception of the deficit/surplus and financing.

The deficit/surplus and financing figures are compiled on slightly different accounting bases. This is because revenue and expenditure data are recorded on a modified cash basis (i.e., they include some items on a due for payment and accrual basis), whereas financing data are on a strict cash basis.

Government domestic and foreign borrowing and amortization data are derived from the system used by the Treasury to manage debt. This system records all debt contracts made by public sector agencies, and tracks all transactions (borrowing, amortization, interest, fees and charges) associated with those contracts. Data on general government financial assets are derived from accounting records of cash holdings. This ensures consistency between changes in liabilities (debt), financial assets (cash), and financing transaction data. One conceptual difference is that domestic financing excludes the noncash issuance of securities (except those used to finance capitalized interest), whereas all securities are included in domestic debt. However, a record is kept of noncash issuance of debt to allow reconciliation with financing data.

Annual data are compiled by summing sub-annual data—there are no benchmarking adjustments required.

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

Government finance statistics time series are consistent over time—the MOF, the Treasury, or the SPO are able to explain all divergences from the expected trend, and there are currently no breaks in times series because of methodological developments, etc.

The MOF, the Treasury, and the SPO are aware that they will need to document and explain changes to the time series that will result from the planned introduction of *GFSM 2001*.

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

There are no general government national (sectoral) accounts for Turkey. The SIS collects data from the MOF and the SPO, and modifies these data as required for input into the national accounts. However, no reconciliation is carried out between government finance and national accounting aggregates.

Domestic debt statistics are consistent with banking statistics and statistics on government financial assets and liabilities held by other sectors, for 1999 and 2000. There is a discrepancy between general government foreign debt statistics compiled by the Treasury and the corresponding statistics compiled by the CBRT. This difference mainly arises from borrowings that are deposited directly to either the exporters' account, or to project implementing institutions' accounts held with banks other than the CBRT. Government finance statistics are not reconciled with either monetary or balance of payments statistics.

### **4.4 Revision policy and practice**

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

The publication of government finance statistics follows a regular and well-understood schedule whereby initial data are preliminary and are subsequently replaced by final data. Final data are subject to subsequent revision, but this does not occur on a routine basis.

#### *4.4.2 Preliminary data are clearly identified*

Preliminary data are not clearly identified, but are notified by a general comment on the publication (e.g., "Unless otherwise indicated, data are preliminary when first released").

#### *4.4.3 Studies and analyses of revisions are made public*

No time series or analyses of revisions to data, or of the relationship between preliminary and final data, are published. However, it is believed that preliminary figures are usually close to final figures, and can be relied upon for analytical purposes.

## 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)

Government finance statistics are available in a variety of dissemination formats, but do not provide the equivalent coverage and detail to that set out in the *GFSM 1986* tables. The data formats are more suited to specialist users, and nonspecialist users would need to make a substantial effort to assemble the data required for fiscal analysis.

#### 5.1.2 Dissemination media and formats are adequate

There is no publication dedicated to providing complete government finance statistics, and users need to navigate through a number of separate publications to assemble the full range of government finance statistics.

A great deal of detail is provided in the *Public Accounts Monthly Bulletin*, but this publication only covers revenue and expenditure of the budget sector. The Treasury publishes budget sector statistics corresponding to MOF statistics (but in less detail), together with financing statistics. The Treasury also publishes additional adjusted budget sector statistics. More complete government finance statistics are included as part of larger documents (e.g., *Government Gazette*, Budget documentation, the SPO's *Monthly Main Economic Indicators*), but do not provide the full range of information in an easily accessible form.

Monthly statistics are available for the budget sector, but all other government finance statistics are only available on an annual basis.

Government finance statistics, covering the main aggregates, are provided on the websites of the MOF, the Treasury, and the SPO.

#### 5.1.3 Statistics are released on a pre-announced schedule

A year-ahead calendar that gives precise release dates is disseminated on the SIS website ([www.die.gov.tr/turcat/sdds/sdds.htm](http://www.die.gov.tr/turcat/sdds/sdds.htm)).

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

Central (budget sector) government statistics are released simultaneously to all interested parties in the press release *Consolidated Budget Realization*, issued by the MOF.

General government statistics are released simultaneously to all interested parties in the SPO's *Monthly Main Economic Indicators*.

Central government debt statistics are released simultaneously to all interested parties by issuing the press releases *Outstanding Domestic Debt*, and *External Debt Stock*.

**5.1.5 Nonpublished (but nonconfidential) sub-aggregates are made available upon request**

Nonpublished (but nonconfidential) sub-aggregates are made available upon request. However, the availability of nonpublished data, and the terms and conditions on which they are made available, are 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**

Documentation is not available on scope, classifications, basis of recording, data sources, or statistical techniques. Summary descriptions of available classification detail have been posted on the IMF's Dissemination Standards Bulletin Board. Notes on the compilation practices used by the SPO are published in the "Annual Program."

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

Not applicable.

**5.3 Assistance to users**

**5.3.1 Contact person for each subject field is publicized**

The contact person for each subject field is publicized, including telephone and facsimile numbers and e-mail addresses, on the IMF's Dissemination Standards Bulletin Board. Such persons can provide assistance for nonexpert users of the statistics. However, not all statistical releases identify contact persons.

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

Catalogues of publications containing government finance statistics are not available.

## V. MONETARY STATISTICS

### 0. Prerequisites of quality

#### 0.1 *Legal and institutional environment*

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

The CBRT is given the legal authority and responsibility for the collection of money and banking statistics in Article 43 of the Law on the CBRT of 1970 (Law No.1211, as amended by Law No. 4651 of April 25, 2001). Article 4 (II.g) gives the CBRT the responsibility to monitor financial markets, request necessary information, and gather statistical information from banks and other financial institutions, and from organizations authorized to regulate and supervise these institutions. The authority of the CBRT to directly request information, balance sheets, and reports of banks, special finance houses, other financial institutions, and persons is stated in Article 43 of the CBRT Law, which also provides that the CBRT may publish statistical information.

The Statistics Department of the CBRT is responsible for research on the statistical methodology, data collection, and compilation, verification, processing, and dissemination of money and banking statistics and balance of payments statistics, and for making the information public. Banks' data are collected by the Banking Data Division, and made available to the Financial Statistics Division for money and banking statistics. CBRT data are submitted by the Accounting Department to the Statistics Department. All inquiries about monetary data are directed to the Statistics Department's Banking Data Division and Financial Statistics Division.

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

Compilation, production and dissemination of monetary and balance of payments statistics fall under the responsibility of the CBRT. There is a protocol with the Banking Regulation and Supervision Agency (BRSA) over the provision of supervisory data; data are provided on the same form for supervisory and statistical purposes, with appendices covering additional statistical issues, and the BRSA has access to the CBRT's database.

In preparing and disseminating data with regard to the SDDS, the SIS, the SPO, and the Treasury are also involved. Meetings are held between the various agencies when necessary.

Within the CBRT there are arrangements in place to ensure the smooth flow of information between the Accounting Department and the Statistics Department's Banking Data Division and Financial Statistics Division. The Banking Data Division collects reporting forms for prudential supervisory and monetary statistics purposes from banks and other financial institutions. The Financial Statistics Division compiles and disseminates sectoral accounts of

the monetary authorities, sectoral accounts of banks, a monetary and banking survey, and monetary aggregates and their counterpart terms.

Money market interest rates and government securities statistics are compiled by the Markets Department of the CBRT. Statistics on international reserves are compiled by the Markets and Accounting Departments. Data on reserve requirements and deposit and lending rates are calculated by the Banking and Financial Institutions Department.

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

Monetary statistics do not disclose data of individual institutions or transactions. Article 43 of the CBRT Law forbids the publication or disclosure by the CBRT of any statistical information having a private and personal nature to an official authority or private body other than the BRSA. It also states that statistical information published by the CBRT will only be used for statistical purposes, and not be considered as evidence. Article 44 (paragraph 3) of the CBRT Law states that all the operations and records of the CBRT's Risk Center, which centralizes the information on the risks of customers of banks and other financial institutions, are confidential.

Article 35 of the CBRT Law obliges the staff of the central bank to observe the secrecy of matters pertaining to the CBRT or to persons and institutions dealing with the CBRT, which they acquire within their official capacities and due to their positions, as well as not to disclose these secrets. This obligation continues to be binding even after staff members leave the CBRT. Staff members of the CBRT are subject to the provisions of the Code of Obligations and liable for the damages they cause to the CBRT in connection with their duties.

Only authorized staff members of the CBRT's Statistics Department have access to data of individual banks before they are aggregated and consolidated for publication. Procedures are in place so that data are consolidated and aggregated as necessary, so as to prevent individual disclosure. Access to the internal database is limited to authorized staff; differentiated degrees of authorization give differential degrees of access to the data. Computers are password protected.

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

Article 43 of the CBRT Law provides the legal basis for the collection of statistical information that supports the compilation of monetary statistics. The CBRT is authorized to request directly, and collect statistical information on the financial system and other information necessary for the surveillance of developments in the economy and balance of payments, from depository corporations, other financial corporations, and persons. The CBRT is also authorized to investigate and supervise the accuracy of the statistical information provided by the concerned parties, and to request additional information and documents. In line with Article 43 (paragraph 4), the CBRT has determined in circulars and

guidelines that reporting forms are required to be submitted to the central bank the month after the end of the reference month. According to Article 68 (III.b) of the CBRT Law, a failure to comply with the abovementioned reporting requirements is punishable by a fine (albeit of amounts that have been severely eroded by inflation) and the CBRT may suspend or restrict institutions' operations authorized by the CBRT Law in the event of nonresponse. In practice, these penalties have not been enforced; the CBRT considers that nonresponse is not common.

All banks, special finance houses, and other financial corporations deemed appropriate by the CBRT and operating in Turkey are also required to submit their annual balance sheets and income statements along with the reports of their boards of directors and auditors to the CBRT after their general assembly meetings and the reports of independent auditing institutions after the date of preparation (Article 43, paragraph 1). According to Article 68 (I.b) of the CBRT Law, a failure to comply with this reporting requirement is punishable by imprisonment for one to three years and a fine of two to four billion Turkish liras. This provision too has reportedly not been enforced.

## **0.2 Resources**

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

The Financial Statistics Division has a total of 13 staff, 6 or 7 of whom are professionals exclusively devoted to the compilation of monetary statistics. Three professionals focus on statistical concepts and methodology and the improvement of coverage and accuracy of monetary data.

Employment in the Statistics Department is competitive, and the number of staff with university degrees in economics or statistics is high. Besides on-the-job training, staff are given the opportunity to participate at courses conducted by international organizations, such as the IMF (especially the Monetary and Financial Statistics training courses), BIS, and Eurostat, and in seminars offered by central banks, such as the Deutsche Bundesbank and Banque de France. Staff turnover is not high; qualified staff have opportunities to attend postgraduate courses overseas.

Computer resources utilized in the collection and compilation of monetary statistics are adequate. The data collection system is highly computerized. All reporting financial institutions submit their returns through the Electronic Data Transfer System, which performs validation checks on the data before releasing them to the next stage in the production cycle. Daily and weekly data are sent directly to the CBRT through e-mail. There are currently no budgetary constraints impeding data collection and compilation activities.

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

Statistics Department management holds meetings with the staff on issues that need to be addressed for enhancing the policy vision of the managers and the understanding of the professional staff within the Department.

In general, all programs in the CBRT are subject to budget considerations and performance assessments. Budgeting of the CBRT is done annually by the Board of Directors every December. Departments identify their budget needs and propose to the Board. Budget allocations are made for each department by the Board. The Accounting Department of the CBRT measures on a quarterly basis the cost-effectiveness in using resources to conduct the work undertaken in each unit. Reviews are conducted regularly by the Human Resources Department in order to improve the work within each unit. Recently, a project was introduced to measure the efficiency of the staff and verify their job descriptions. New technology for data processing and dissemination is always tested by computer and system analysis experts.

### *0.3 Quality awareness*

#### *0.3.1 Processes are in place to focus on quality*

The CBRT recognizes that official statistics must have the confidence of their users, and exercises quality control at every stage of data production and dissemination, although no explicit measures are undertaken to focus on quality overall. The Statistics Department verifies that data reporting practices followed by the banks are consistent with the regulations, and has systems and procedures in place to ensure quality in the compilation process. All levels of the Department participate actively in the review of data prior to publication.

The source data submitted by the reporting institutions to the Banking Data Division are crosschecked for accuracy, and any discrepancies are investigated. Data reporting practices are set by the Financial Statistics Division in line with the sector classification in Uniform Chart of Accounts in Turkey. Validation procedures for assessing the plausibility or reasonableness of reported data are undertaken visually on a bank-by-bank basis. The Financial Statistics Division consults with the reporting institutions to verify the data for possible misclassifications.

An external auditing company audits the financial statements of the CBRT.

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

The quality of the collection, processing, and monitoring of statistics is monitored through crosschecks; for problems in collection, reporting institutions are informed, and guided by the staff of the Statistics Department.

No formal surveys of users are undertaken; however, users can contact the Statistics Department, for instance through its website, and responses will be provided to all requests and questions.

There is a Supreme Statistical Council, but it is not very active at the moment and does not impact on the statistics of the CBRT.

There is no other body outside the Statistics Department that provides guidance on the quality of monetary statistics, and on strategies for improving data production.

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

The Statistics Department has established a working group that monitors developments and changes in financial markets, and works closely on improving the methodological soundness of the data to take into account new initiatives and developments in the financial system. The working group is currently considering and analyzing the inclusion of other financial institutions, such as insurance and leasing companies and pension funds, into monetary statistics.

There is a wide recognition of the tradeoffs between data quality and timeliness. The production of monetary statistics is fully automated and includes a series of checks and validations at every stage of the production cycle. Timeliness is regarded as one of the most important dimensions of data quality, in line with the SDDS requirements. To accommodate this in the event of delays in reporting, some data may be published as provisional.

Meetings are held periodically with policy makers and other data users to identify any emerging data requirements. The CBRT also invites user comments on the relevance and usefulness of the monetary statistics via its website.

**1. Integrity**

**1.1 *Professionalism***

**1.1.1 *Statistics are compiled on an impartial basis***

The statutory provisions under which the CBRT compiles monetary statistics are adequate to support its independence in conducting these functions. In this regard, Article 4 of the CBRT Law stipulates that the CBRT shall enjoy absolute autonomy in exercising the powers and carrying out the duties granted by this Law under its own responsibility.

Professionalism of the staff in charge of the compilation of monetary statistics is promoted by encouraging participation in lectures, conferences, and meetings with other professional compilers (e.g., the SIS), other central banks, and international organizations.

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

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

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

The Statistics Department of the CBRT comments on erroneous interpretation of its statistics if deemed truly significant. The Statistics Department seeks to prevent misinterpretation or misuse of monetary statistics by providing explanatory notes in its publications, website, and in press releases.

**1.2 Transparency**

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

The CBRT Law, which constitutes the base for the compilation and dissemination of monetary data is available on the CBRT website. The Advance Release Calendar for Turkey's SDDS data categories is available to the public on the IMF's website, and this information is also announced as a note in the *Quarterly Bulletin*.

Statistical publications provide address and telephone numbers of the respective CBRT department from which additional publications can be provided.

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

Following the approval of the data by the Financial Statistics Department, a limited number of senior CBRT staff have access to data prior to their publication. No official outside the CBRT has access to data prior to publication.

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

The Statistics Department of the CBRT is identified as the source of the monetary statistics published in the *Quarterly Bulletin*. The CBRT does not explicitly request 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 data classification, source data, and statistical techniques are announced simultaneously with the release of the data. Also, if any interpretation is needed regarding changes in time series, explanation is provided as a note in the publication in which the change first takes place. Advance notice is given only in the case of major changes.

### **1.3 Ethical standards**

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

The Code of Conduct for the Staff of the CBRT provides broad ethical guidelines for employees of the CBRT. Every new CBRT staff joins a two-week training program about the fundamental duties and powers of the CBRT and each department. New staff members are informed about the guidelines.

## **2. Methodological soundness**

### **2.1 Concepts and definitions**

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

The analytical framework used by the CBRT in compiling sectoral accounts of the monetary authorities (that is, the consolidation of the CBRT and monetary authority functions undertaken by the central government) and sectoral accounts of deposit money banks (comprising resident banks that accept demand and other deposits) reflects concepts and principles that are, in general, based on the IMF's *Draft Guide to Money and Banking Statistics in International Financial Statistics* (December 1984). The *monetary survey* is derived by consolidating the accounts of the monetary authorities and the banks, and provides an analytical presentation of the intermediation role of the central bank and banks. The monetary and credit aggregates identified in the monetary survey are (i) money supply M1 (currency in circulation and demand deposits); (ii) M2 (M1 plus time and savings deposits); (iii) broad money M2Y (M2 plus residents' foreign exchange deposits); and (iv) M3Y (M2Y plus official demand and time deposits plus other CBRT deposits). Other aggregates identified in the monetary survey are (i) foreign assets (net); (ii) domestic credit (disaggregated by claims on central government (net), claims on local governments, claims on private sector, claims on investment and development banks, and claims on nonbank financial institutions); and (iii) other items (net). The CBRT also compiles a banking survey, which consolidates the sectoral accounts of the central bank, banks, and nondeposit-taking investment and development banks.

Following the publication in September 2000 of the IMF's *Monetary and Financial Statistics Manual (MFSM)*, the CBRT intends to revise its procedures and formats for collection, compilation, and dissemination of monetary statistics. This section compares present data compilation practices with those recommended in the *MFSM*. Hence, it indicates areas where the CBRT has yet to make changes to comply with the new methodological standard. For example, the CBRT is conducting studies for a possible future compilation of a *Financial Corporations Survey* that would extend the coverage beyond the deposit-taking institutions covered in the monetary survey.

## 2.2 Scope

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

The depository corporations sector of Turkey comprises the CBRT, 49 commercial banks (deposit money banks), and 16 branches/subsidiaries of foreign banks operating in Turkey. According to the Banks Act of 1999, “bank” means any entity incorporated in Turkey as a bank in accordance with this Act and any branch in Turkey of a bank established in a foreign country. Banks are authorized to accept deposits and provide credits in their own name and on their own account. The institutional coverage of monetary statistics includes the banks’ domestic headquarters and their domestic branches, and domestic branches of foreign banks operating in Turkey. The financial assets and liabilities of banks under the control of the Savings Deposit Insurance Fund for restructuring and privatization purposes are included in the monetary survey; their deposits are withdrawable without restriction and included in broad money.

The monetary statistics also encompasses a number of other financial corporations whose liabilities are not included in broad money: 16 investment and development banks and five special finance houses. Investment and development banks do not accept deposits from the public, but raise funds by issuing securities. Special finance houses do not offer predetermined interest on financial transactions, but accept deposits in the form of profit and loss sharing certificates. The liabilities of both types of financial institutions are currently not included in the national definition of broad money and are thus not part of the money-creating sector. The CBRT consolidates the accounts of the investment and development banks with the monetary survey to derive a banking sector for Turkey. The special finance houses’ aggregated asset and liability positions and their aggregated profit and loss accounts are published in the CBRT’s *Quarterly Bulletin*.

For analytical purposes, the new *MFSM* defines the Other Depository Corporations (ODCs) subsector, which consists of all resident financial corporations (except the central bank) and quasi-corporations mainly engaged in financial intermediation, whose liabilities consist of deposits or financial instruments that are included in the definition of broad money. The national definition of broad money is thus fundamental to the methodology of the *MFSM*, in that it determines which units in the financial corporations sector are classified as ODCs. In Turkey, deposit money banks are the only deposit-taking financial institutions fulfilling both criteria that classify them as ODCs—that is, Turkey’s commercial banks are mainly engaged in financial intermediation and issue deposit liabilities that are included in Turkey’s broad money M2Y. Thus, the ODC survey—which is, in accordance with the *MFSM*, the major framework for compiling monetary statistics—for Turkey would have the same coverage as the currently compiled and published *Sectoral Accounts of Deposit Money Banks*. In line with the *MFSM* guidelines, investment and development banks and special finance houses are to be classified as *Other Financial Intermediaries*. Their liabilities would be included in a *Financial Corporations Survey* that would extend the coverage beyond the central bank and ODCs covered in the depository corporations survey (or monetary survey). As a result, the

scope of the monetary statistics compiled by the CBRT is complete and consistent with the guidelines recommended in the *MFSM*.

The definition of residency in monetary statistics is consistent with the *BPM5* and *1993 SNA*. Branches of foreign banks in Turkey are regarded as residents, whereas branches of domestic banks abroad are classified as nonresidents.

### **2.3 Classification/sectorization**

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

The CBRT uses the residency criterion to distinguish between domestic and external accounts for the compilation of monetary statistics. The delineation between resident and nonresident institutional units is broadly consistent with the criterion in the *BPM5*, *1993 SNA*, and *MFSM*.

The sectorization of the domestic economy by the CBRT is principally in line with the *MFSM*. The sectoral classification of resident units recommended in the *MFSM*, for the purpose of compiling monetary statistics, refers mainly to the following subsectors: (i) central bank; (ii) other depository corporations; (iii) other financial corporations; (iv) central government; (v) state and local government; (vi) public nonfinancial corporations; (vii) other nonfinancial corporations; and (viii) other resident sectors.

In the monetary statistics compiled by the CBRT, the following sectoral groupings of resident institutional units are distinguished: (i) central government; (ii) local governments; (iii) central bank; (iv) public deposit money banks; (v) private deposit money banks; (vi) foreign deposit money banks; (vii) investment and development banks; (viii) nonbank financial institutions; (ix) nonfinancial public enterprises; (x) private sector; and (xi) other sectors. The current treatment of institutional units deviates from the guidelines of the *MFSM*, in that private nonfinancial enterprises and households (including nonprofit institutions serving households) are not separately identified in the sectoral accounts of the monetary survey. These institutional units are currently aggregated into “private sector.” Agricultural credit and sales cooperatives are also included in the “private sector” rather than in “nonbank financial institutions.”

The principles underlying the classification of financial instruments in Turkey’s monetary statistics are broadly consistent with international standards and, notwithstanding differences in terminology used, generally consistent with the *MFSM* recommendations. Although identified in the returns for supervisory purposes, data on financial derivatives (other than foreign exchange swaps) are not included in monetary statistics. Contrary to the *MFSM* recommendations, securities repurchase operations are recorded as outright sales of securities in the CBRT balance sheet. For statistical purposes, however, the CBRT treats securities repurchase operations as collateralized loans and makes adjustments accordingly. This treatment of securities repurchase operations is consistent with the *MFSM* recommendations.

## **2.4 Basis for recording**

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

The general recommendation of the *MFSM* is that the valuation of financial assets and liabilities should be done on the basis of market prices or market-price equivalents (fair values). The valuation of loans is an exception to this principle and loan values should be based on creditors' outstanding claims without adjustment for expected loan losses. This amount comprises the outstanding principal plus any accrued interest and is referred to as the book value of a loan. Monetary gold and nonmonetary gold should be valued on the basis of the market price of gold. Holding gains and losses arising from changes in market values (or fair values) of financial assets and of outstanding liabilities should be recorded separately in a revaluation account.

The CBRT's financial statements are prepared in accordance with the related Turkish Legislation and requirements of the CBRT Law. Financial statements, based on the International Accounting Standards (IAS), will be prepared for the year 2001 in conjunction with statutory local financial statements. The BRSA is working on harmonizing existing accounting requirements for banks in line with IAS.

Securities other than shares purchased by the CBRT for its own account on the secondary market are valued at market prices. Marketable government bonds purchased by the CBRT for open market operations and securities purchased with agreements to resell are stated in the CBRT's balance sheet at acquisition cost. Securities not traded on a stock exchange are valued at prices declared by the CBRT and published in the Official Gazette. Fixed income securities denominated in foreign currency with coupon payments are valued using the coupon rate. Discounted foreign currency securities are valued taking the principal amount and accrue interest on a straightline approach (i.e., an equal amount of interest in each period). Securities issued by nonresidents are held at historical cost. The CBRT plans to value all securities at market value in the balance sheet for December 2001. The CBRT records its foreign equity shares at acquisition cost and revalues them at current exchange rates prevailing at the balance sheet date. Monetary and nonmonetary gold at the CBRT is valued, throughout the year, based on the price determined on international markets on the last working day of the year as the lower of the prices set in the morning and in the afternoon.

Securities, such as bills and bonds, acquired by banks are accounted according to acquisition costs and valued at market prices through redemption or, in the case of government domestic debt instruments, at daily indicative values (fair values) determined by the CBRT. The holding gains arising from the differences between acquisition costs and the revalued amount are recorded in the revaluation accounts on the debit side and in the income accounts on the credit side. Banks' holdings of shares traded in markets are valued by market prices, which are calculated as the weighted averages of the last 30 working days. The methods of moving and end-period weighted average cost are used. Nontraded shares are valued by acquisition cost. Holding losses for traded and nontraded shares are calculated by using market or fair

prices, respectively (loss provisions are recorded separately). Holding gains for shares traded in markets are recorded in a separate fund account under equities. Gold held by banks is valued at prevailing market prices on the reporting date.

Consistent with the recommendations of the *MFSM*, the loan portfolio and deposits on the balance sheets of the banks are valued at book value. However, different to the *MFSM*, the book value of banks' loan portfolios in Turkey's monetary statistics comprise only the outstanding principal amount, excluding any accrued interest. In line with the recommendations of the *MFSM*, loan valuation is not adjusted for expected loan losses. Provisions for expected loan losses are recorded as separate negative entries on the asset side of the balance sheet.

According to the *MFSM*, all stocks and flows denominated in foreign currency should be converted to national currency values at the market exchange rate prevailing at the time they are entered in the accounts. The midpoint between the buying and selling rate of exchange should be used so that any service charge is excluded. In the monetary statistics of Turkey, CBRT's foreign assets and liabilities are converted at the market exchange rate at the end of the period, however, using only the buying rate determined daily by the CBRT. The banks' foreign currency-denominated stocks are converted into national currency amounts using the banks' own buying exchange rate prevailing at the moment when the transaction occurs. In line with the *MFSM* recommendations, holding gains or losses arising from changes in the exchange rates are classified into a special revaluation account.

The *MFSM* recommends that data be compiled on stocks and on each of the three flows components: *transactions*, *valuations*, and *other changes in the volume of assets*. In Turkey, banks do not provide financial information on flows, and the CBRT does not derive for monetary statistics purposes transactions from stock data.

#### 2.4.2 Recording is done on an accrual basis

In accordance with the accrual accounting principles recommended in the *MFSM*, interest due but not paid on financial instruments should be incorporated into the outstanding amount of the financial asset or liability, rather than being treated as part of other accounts receivable/payable. The accounting standards in Turkey require interest to be accrued on a monthly basis, but do not require accrued interest to be incorporated into the underlying financial instrument. The CBRT is working on directly incorporating the accrued interest into the outstanding amount of the financial asset or liability. Interest arrears are recorded separately when past due.

In general, transactions are recorded at the time the transaction occurs by means of simultaneous electronic recording (Electronic Fund Transfer System).

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

In line with the general principle of the *MFSM*, assets and liabilities of the CBRT, banks, and other financial institutions, are collected and compiled on a gross basis. In line with the *MFSM*, claims on particular transactors are not netted against liabilities to those transactors. Data presented on a net basis (e.g., “Foreign assets (net)” and “Claims on central government (net)” in the monetary and banking surveys) are also shown with the underlying gross data.

For the compilation of the sectoral balance sheets of the CBRT and deposit money banks, the data on financial assets and liabilities are aggregated into major categories (e.g., claims classified by debtors and deposits classified by creditors). The monetary and banking surveys are obtained by canceling out all outstanding claims and liabilities between the CBRT and banks and between the banks.

**3. Accuracy and reliability**

**3.1 Source data**

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

The source data for compiling the sectoral accounts for the monetary authorities are the accounting records (balance sheets) of the CBRT prepared by the Accounting Department of the CBRT on a weekly and monthly basis. These reports are generated by an electronic general ledger system based on complete reporting. Source transactions are captured and the reports are generated from a predetermined classification of each account.

The basic data sources for the commercial banks are the individual monthly returns. Items in these returns are derived from accounting records of the commercial banks. The incoming data are continuously reviewed by the Banking Data Division and Financial Statistics Division to ensure full institutional coverage. The reporting forms capture in principle the full range of financial instruments and economic sectors. They provide sufficient detail overall to enable the classification of all financial instruments and economic sectors, as defined in the *MFSM*.

For the compilation of the monetary survey, some positions in the CBRT balance sheet (e.g., repurchase agreements and swap transactions with banks) are used as counterpart items in the banks' sectoral accounts, because they are treated in the banks' accounting system as off-balance sheet transactions. In its efforts to harmonize the existing accounting requirements for banks with IAS, the BRSA intends to change the accounting legislation and banks' chart of accounts by issuing the “Regulation of the Accounting Practices” in January 2002, which would be fully in effect by July 1, 2002. In addition, the BRSA has been working to finalize a regulation requiring repurchase agreements to be brought on balance sheet as collateralized finance transactions by February 2002.

The financial press is monitored for information on developments in financial markets that may be of relevance for the compilation of monetary statistics. In this context, reports may be prepared by the staff for information on financial instruments and markets. Meetings with financial market participants and the business community to identify new developments that need to be taken into account in the compilation system of monetary statistics are not common.

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

The monetary survey is based on complete reporting by deposit-taking institutions. There is an ongoing effort at the CBRT to use data sources that reasonably approximate the definitions, scope, classifications, time of recording, and valuation required to compile sound monetary statistics. Statistical information on the subsectors nonfinancial private enterprises and households are only available for deposits held with, and loans granted by, banks. However, the value of loans granted to households is approximated. It comprises data on "credits to personnel," "consumer loans," and "credit card loans." The secure data for consumer and credit card loans are retrieved from a banking supervisory reporting form, which does not generate information that would permit appropriate sectorization of the domestic economy. The CBRT makes the assumption that these loans are granted to households only.

Transactions of the CBRT and banks with counterparties that cannot be reasonably approximated or allocated to specific instruments or sectors are recorded in "other assets" and "other liabilities."

The statistical compilers of the Banking Data Division and Financial Statistics Division are aware of methodological differences between primary source data derived from balance sheets and secondary data sources, such as financial market data and data reported from the banks' counterparties.

### *3.1.3 Source data are timely*

The data collection system allows the timely compilation of monetary statistics, which are released in the CBRT's *Quarterly Bulletin*. Core statistical data comprising the weekly statement and selected liability items of the CBRT, money supply, and selected balance sheet items of the banking system are published two weeks after the reference date in the *Weekly Press Bulletin*.

The accounting records of the CBRT are available on a daily and weekly basis, and provided by e-mail to the Financial Statistics Division. The returns of the banks are submitted on a weekly basis to the Financial Statistics Division and monthly basis to the Banking Data Division. The banks are required to submit via e-mail weekly data on main balance sheet items, such as credits and deposits, with limited sector and instrument disaggregation. For the

banks' monthly returns, which are submitted to the Banking Data Division electronically via the Electronic Data Transfer System, timeliness is in principal one month. At present, a flexibility option is utilized for the two-month timeliness of bank data.

The Banking Data and Financial Statistics Divisions conduct follow ups with late respondents via telephone in order to collect information to meet publication deadlines.

### **3.2 Statistical techniques**

#### *3.2.1 Data compilation employs sound statistical techniques*

Reporting forms are easy to complete for the respondents (using Excel format), and they include several checks within the tables. New reporting forms are always pilot-tested with several respondents prior to their implementation. The statistical techniques used to compile monetary statistics are automated. In processing source data, computerized files that incorporate macros are used to avoid processing errors.

Procedures for data management are documented and assisted by the Data Processing Department of the CBRT.

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

In cases where no return is received from a bank, the previous month's balance sheet data are carried forward to calculate preliminary monetary aggregates and credit extended by the banking sector until a new return has been officially received and processed. Adjustments for missing observations are documented. The CBRT does not calculate seasonally adjusted monetary data. However, it is examining methods recommended by Eurostat for calculating seasonally adjusted monetary data.

### **3.3 Assessment and validation of source data**

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

Queries regarding the balance sheet data of the CBRT are solved between the Accounting Department and the Financial Statistics Division. Bank reporting forms are occasionally revised to reflect changes in the presentation of accounting records, sector reclassifications, and the needs of compilers. The Statistics Department is authorized to make revisions only in the reporting form that has been primarily designed to collect statistical information for the compilation of monetary statistics (ST100A form). If necessary, the CBRT conducts meetings with the BRSA, which has the authority to introduce changes to the Uniform Chart

of Accounts. This accounting framework constitutes the basis for the banks' reporting forms primarily designed for supervisory purposes.

A working group of the Financial Statistics Division monitors developments and changes in financial markets, which may affect the compilation of monetary statistics.

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

#### ***3.4.1 Main intermediate data are validated against other information where applicable***

If deemed necessary, the accuracy of the balance sheets submitted by banks is checked against secondary data sources, such as statistical information on the banking system published by the Banking Association of Turkey. In general, however, most queries concerning monetary statistics are resolved by the Financial Statistics and Banking Data Divisions directly with the banks by telephone.

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

The Financial Statistics and Banking Data Divisions investigate statistical discrepancies and determine major factors that might be contributing to them.

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

Large fluctuations in monetary or credit aggregates are rare, and likely to occur only after a significant change in statistical methodology. In those circumstances, upon the release of monetary statistics, the Financial Statistics Division is likely to receive inquiries from data users and handle them directly. In the case of large and unexplained fluctuations in data series, the Financial Statistics Division would investigate possible classification/sectorization errors by individual respondents.

### ***3.5 Revision studies***

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

Studies and analyses of revisions in source data, methodology, and compilation techniques are done irregularly. Investigation results and adjustments made in a revision process are taken into account in compiling data for the subsequent periods.

## 4. Serviceability

### 4.1 Relevance

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

There is no formally established process of consultation with policy departments, ministries, or representatives from the private sector or academia. The Statistics Department conducts informal periodic reviews with the Research Department, Markets Department, Banking and Financial Institutions Department, and external users through e-mail, telephone, and facsimile. The Statistics Department regularly participates in international statistical meetings and seminars organized by international and regional organizations.

### 4.2 Timeliness and periodicity

#### 4.2.1 *Timeliness follows dissemination standards*

The analytical accounts of the central bank are disseminated within one week after the reference period, consistent with the specifications of the SDDS. A flexibility option is being taken for the timeliness of the data on the analytical accounts of the banking sector. The data on banks, which cover all the prescribed components, are disseminated within two months (except December, January, and February) after the reference period. However, because of year-end delays, data for December, January, and February are disseminated no later than three months after the reference period. The monetary survey is computed and disseminated after data on the banking system have been made available to the CBRT.

There are three reasons why Turkey obtains exemption from the prescribed level of the SDDS data category timeliness (that is, dissemination of data within one month of the end of the reference month): (1) Turkey has an extensive branch banking system (7,286 domestic bank branches, as of September 2001), which makes it very difficult to meet the timeliness requirement. The monetary statistics cover all bank branches and no estimations are made for late reporting banks. (2) The BRSA requires that banks have to prepare their accounting records in line with the Uniform Chart of Accounts within one month after the reference month. The validation procedures at the CBRT for checking the consistency and plausibility of the reported data, as well as the compilation of monetary statistics takes at least one week. Thus, the complete process of data collection, data processing, and the preparations for publication takes at least five weeks. (3) In the context of the financial crisis in the banking sector, mergers, acquisitions, and liquidation of some banks have made it difficult to compile timely data during the restructuring process. Once banks are brought under the control of the Savings Deposit Insurance Fund they have been reporting again on a timely basis, but at the moment the restructuring process still continues in the banking system.

#### **4.2.2 Periodicity follows dissemination standards**

The analytical accounts of the central bank are disseminated on a weekly basis, and those of the banking sector on a monthly basis, consistent with the specifications of the SDDS.

### **4.3 Consistency**

#### *4.3.1 Statistics are consistent within the dataset*

The central banks' and commercial banks' records for claims on, and liabilities to, each other show discrepancies, because of differences in the time of recording financial transactions. A reconciliation of stock and flow data is not possible, because flow data are not compiled for monetary statistics.

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

Consistent time series are available in the Electronic Data Delivery System of the CBRT website. When changes in source data, methodology and statistical techniques are introduced, all time series are revised. Main breaks and discontinuities in the time series are explained in detail in attached notes/footnotes. Unusual changes in economic trends are explained by the Research Department in the *Monthly Economic Bulletin* of the CBRT.

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

The Statistics Department irregularly checks the consistency of the monetary statistics with balance of payments statistics (international investment position). Consistency checks between government finance statistics and monetary statistics, and foreign assets in monetary statistics with balance of payments statistics, are conducted occasionally. The banks' monthly data are published as provisional, while annual data are final.

### **4.4 Revision policy and practice**

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

Monthly and weekly data of deposit money banks are provisional. Banks may send revisions in their next return. In practice, revisions are rare and insignificant. Monthly data of the CBRT are final. Data on banks are subject to revisions throughout the year, and become final the following year. Revisions due to important changes in statistical methodology are explained in the related publication.

#### *4.4.2 Preliminary data are clearly identified*

Users are alerted that the initially published data for banks are preliminary (data are marked with “\*\*”) and subject to revision. The revised data are disseminated in the same way, and at the same level of detail, as the data being revised.

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

Only major differences between preliminary and revised data are explained in a footnote.

### **5. Accessibility**

#### **5.1 Data accessibility**

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

The presentation of monetary statistics by the CBRT facilitates the interpretation of the data. The *Monthly Economic Bulletin*, prepared by the Research Department, covers developments in money markets, balance sheets of the CBRT, money supply, and credits. Charts and tables are also disseminated in this report. Estimates are produced only for internal analytical purposes, and are not disseminated.

##### **5.1.2 Dissemination media and formats are adequate**

Monetary data are disseminated in hardcopy and in electronic formats to meet the needs of data users. Weekly provisional data are disseminated for the purpose of monitoring the basic balance sheet aggregates of the banking system. Historical time series are disseminated in the Electronic Data Delivery System. Monthly time series are also disseminated on the website of the CBRT via the Electronic Data Delivery System. More detailed quarterly data are disseminated in the *Quarterly Bulletin*, which is available in the *Periodic Publication Section* of CBRT's official website.

##### **5.1.3 Statistics are released on the pre-announced schedule**

Monetary statistics are released according to an Advance Release Calendar that is posted on the website of the CBRT. A notice to this effect is published in the *Quarterly Bulletin* of the CBRT.

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

Data are released simultaneously to all interested users, and are not made available to officials outside the CBRT before they are released to the public.

##### **5.1.5 Nonpublished (but nonconfidential) sub-aggregates are made available upon request**

Unpublished and nonconfidential data are made available upon request free of charge upon the authority of senior staff of the Financial Statistics Division. If there is substantial demand, unpublished data may be disseminated in publications with the permission of the Vice-Governor, who is responsible for the Statistics Department.

There is so far no seasonal adjustment of monetary data. Studies on the methods, however, are under way.

### **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 monetary statistics' metadata pages, including the concepts, classifications, data sources, characteristics, and definitions are available in the SDDS framework posted on the IMF's Dissemination Standards Bulletin Board. These metadata pages are scrutinized and updated periodically.

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

The CBRT is planning to prepare a brochure in order to inform external users about Turkey's monetary statistics and other financial statistics.

### **5.3     *Assistance to users***

#### **5.3.1     *Contact person for each subject field is publicized***

Prompt and knowledgeable service and support is provided to statistics users. However, not all statistical releases identify specific individuals. The phone numbers and email addresses of the CBRT's heads of departments can be found in the "General Information" section of CBRT's website. No brochures have been developed to educate users. Users surveys are produced occasionally.

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

Publications, documents, and other services are free of charge. A catalogue of publications is not available. Subscription transactions are executed by the Research Department's Library and Documentation Division of the CBRT. Periodic publications are disseminated on the website of the CBRT.

## 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 statistics is clearly specified*

The compilation and dissemination of the balance of payments data are the responsibility of the CBRT, and are governed by the terms and conditions of the Law on the CBRT of 1970 (Law No. 1211), as amended by Law No. 4651 of April 25, 2001, and the 1989 Decree No. 32 and its amendments. Article 43 of this Law authorizes the CBRT to directly request and collect all statistical information relating to the financial system and other statistical information that shall be deemed necessary for the surveillance of developments in the economy and the balance of payments, from banks, other financial institutions, and persons. The latter includes legal persons and households. This article also authorizes the CBRT to investigate and supervise the accuracy of the aforesaid information, and to request additional information and documents. The last provision of Article 43 establishes that the CBRT may publish the statistical information.

The Statistics Department of the CBRT is responsible for research on the statistical methodology, data collection, and compilation, verification, processing, and dissemination of money and banking statistics and balance of payments statistics, and for making the information public.

The SIS is responsible for merchandise trade data, as specified under the Statistics Law and subsequent regulations.

Data on public external debt are compiled and disseminated by the Treasury under the terms of the 1994 Treasury Establishment Law. The CBRT is responsible for all private external data since October 2001, following a regulation transferring responsibility for medium- and long-term private external debt from the Treasury.

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

The working arrangements among agencies for the provision of statistical data to the CBRT for balance of payments compilation are adequate. In compiling the balance of payments, the CBRT draws on its data collection system, which is mainly based on information of foreign currency transactions made through resident banks in Turkey using the International Transaction Reporting System, surveys on travel and shuttle trade, and merchandise trade data provided by the SIS.

Data on the stock of external debt, both private and public, are consolidated and disseminated by the Treasury on a quarterly basis. The CBRT provides to the Treasury data on a regular

basis on the deposit accounts held in the CBRT by nonresidents and on short-term external debt. From October 2001, the CBRT also provides to the Treasury data on medium- and long-term private debt.

Several meetings have been conducted between the two institutions to design and implement this new arrangement that aims to improve the external debt data collection system. In August 28, 2001, an amendment to Decree No. 32 was published in the Official Gazette, by which from October 2001 the CBRT—and no longer the Treasury—is responsible for compiling private sector medium- and long-term debt. The amendment established that a protocol was to be signed between the CBRT and the Treasury. The protocol clearly defined the new working arrangement regarding data sharing and coordination between both institutions.

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

Article 43 of the CBRT Law establishes that the CBRT shall not publish, disclose, or submit statistical information having a private and personal nature to an official authority or private body other than the BRSA. This article also states that collected statistical information shall not be used for purposes other than statistics and shall not be considered as evidence. In line with this provision, surveys indicate that collected information is confidential and only for statistical purposes. Moreover, the confidentiality of the surveys regarding travel and shuttle trade is guaranteed because the respondent is identified neither by name nor code.

Article 35 of the CBRT Law establishes that CBRT personnel are obliged to observe the secrecy of matters pertaining to the CBRT or to persons and institutions dealing with the CBRT that they acquire within their official capacities and due to their positions. This obligation continues to be binding even after the staff leave the CBRT. Personnel of the CBRT are subject to the provisions stipulated in the Code of Conduct for the damages they cause to the CBRT in connection with their duties.

Statistical tables and reports on balance of payments data are prepared in a way that prevents disclosure of individual data. The Balance of Payments Division does not disseminate data for a particular item if the number of respondents is less than three. The computer systems prevent unauthorized access to individual data through password protection.

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

Article 43 of the CBRT Law provides the legal basis for the collection of statistical information for compiling balance of payments. No conflicts or potential conflicts between the legal authority to collect data required for balance of payments statistics and other laws or provisions have been identified. Information has to be submitted accurately within the period and in the form determined by the CBRT. Article 68 of this Law, amended on April 25, 2001, stipulates penalties for noncompliance with reporting requirements. In practice, these penalties have not been enforced; the CBRT considers that nonresponse is not common.

The Balance of Payments Division seeks to secure cooperation of the banks by creating goodwill, answering questions promptly, emphasizing the importance of balance of payments statistics for economic policy formulation, and providing assistance in completing and submitting forms. New data requests are preceded by pilot studies.

## **0.2 Resources**

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

The Balance of Payments Division of the Statistics Department of the CBRT is responsible for producing and disseminating balance of payments statistics. The Division is comprised of 20 professionals who are responsible for compiling the balance of payments and the international investment position, as well as analyzing and interpreting balance of payments data. Given these arrangements, staffing is adequate to perform existing tasks. The qualifications of the staff are also adequate. Staff turnover is not high. Currently, the Division Manager position is vacant, due to the promotion of the previous Manager to the position of Deputy Director of the Statistics Department. Sixteen staff members are university graduates, and three have a Masters degree in economics. Two staff members are currently abroad for graduate studies in economics, fully financed by the CBRT. Two additional staff members are to be sent abroad for graduate studies in economics in 2002. Only two staff members have participated in balance of payment courses abroad. These courses were organized by the IMF in Washington, D.C.

The Balance of Payments Division is equipped with personal computers, which are LAN connected. In general, computer resources are adequate to perform existing tasks. Excel datasheets are the main software used for compiling and analyzing the statistical series.

The level of professional expertise of the staff is high. Nevertheless, the staff are not very familiar with enterprise surveys due to the fact that the main data source for the balance of payments is the banks' foreign exchange records.

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

In September of each year the CBRT undertakes an annual review of its resources in the context of budgetary planning for the following year.

The Accounting Department conducts a quarterly internal study to measure resources used to conduct the work in each unit. Reviews are conducted by the Human Resources Department to improve the work; a recent project established job descriptions for the staff. Departments prepare annual budgets for their work. New technology for data processing and/or data management is always tested by computer and systems analysis experts.

When necessary, the CBRT requests technical assistance from the IMF to evaluate the balance of payments methodology and compilation system. In February 1997, a balance of

payments statistics mission assessed the methodology for estimating unrecorded shuttle trade. In September 2000, a balance of payments statistics mission reviewed the methods for estimating services, income, and current transfers receipts, and assessed the feasibility of alternative approaches.

### **0.3 Quality awareness**

#### *0.3.1 Processes are in place to focus on quality*

Managers and staff of the CBRT are conscious that quality is the cornerstone of statistical work. They are sensitive to all five dimensions of data quality and conduct their work accordingly.

The Statistics Department of the CBRT was established in August 1998, comprising several Divisions that were previously in other Departments of the CBRT. This reorganization highlights the increased importance of statistics for the CBRT.

Data are checked for misreporting, and the CBRT reverts to the reporting institution when necessary. Balance of payments statistics staff visit reporting institutions once or twice a year to review processing for data provision. No explicit measures are undertaken to focus on quality overall. An external audit company audits the CBRT balance sheet.

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

The quality of the collection, processing, and monitoring of statistics is monitored through crosschecks; for problems in collection, reporting institutions are informed, and guided by the staff of the Statistics Department. For its debt data, the CBRT also monitors the media, e.g., to obtain information on syndicated credits.

No formal surveys of users are undertaken; however, users can contact the Statistics Department, for instance through their website, and responses are provided to all requests and questions.

There is a Supreme Statistical Council, but it is not very active at the moment and does not impact on the statistics of the CBRT.

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

CBRT management recognizes the tradeoffs among the dimensions of data quality. Timeliness is regarded as one of the most important dimensions of data quality, in line with the SDDS. To accommodate this in the event of delays in reporting, some data may be published as provisional.

Currently, there are more than 2000 subscribers to the statistics produced by the CBRT, who automatically receive monthly balance of payments data through the Internet. Improvement of data quality is taken into account in forward planning. For example, data quality improvements are expected in the short-term in foreign direct investment and private sector medium- and long-term debt data, through the implementation of enterprise surveys and a new working arrangement for the data compilation, respectively. In addition, the CBRT is considering a study to improve the quality of balance of payments data through enhancing coverage of services.

## **1. Integrity**

### ***1.1 Professionalism***

#### ***1.1.1 Statistics are compiled on an impartial basis***

Article 4 of the CBRT Law establishes that the CBRT shall enjoy absolute autonomy in exercising the powers and carrying out the duties granted by this Law under its own responsibility. The terms and conditions under which the balance of payments statistics are produced promote the professional independence of the CBRT.

Professional competence plays a key role in recruitment and promotion policies. When major changes in methodology occur, the CBRT publishes methodological papers on the CBRT website and/or in a quarterly publication. Staff participate actively in regional and international meetings and conferences (Eurostat, OECD, IMF, ECB, BIS, among others). Occasionally, lectures and/or press conferences are organized in which outside experts and the media are invited to participate.

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

The choice of source data and statistical techniques for balance of payments compilation is based solely on statistical considerations made by the CBRT staff. The balance of payments reporting system is mainly based on information of foreign currency transactions made through resident banks in Turkey using the International Transaction Reporting System, surveys on travel and shuttle trade, and merchandise trade data provided by the SIS.

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

If there is an erroneous interpretation and/or misuse of statistics in the press, the CBRT comments and provides clarification in the media and on the CBRT's website. If needed, the CBRT contacts the reporters or other interested parties, to have the erroneous interpretation corrected.

## **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 under which balance of payments statistics are collected, processed, and disseminated are available to the public, including the references to the obligation to compile and disseminate statistics, and the confidentiality of individual responses. The CBRT Law and the Statistical Law are available on the CBRT's website and on the SIS's website, respectively, as well as in hardcopy formats. Both laws are published in Turkish and English.

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

As indicated in Turkey's balance of payments metadata on the IMF's Dissemination Standards Bulletin Board, no one outside the CBRT has access to the data before their release to the public. Data are confidential until the issuance of the press release, which is made solely by the CBRT.

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

Balance of payments statistics are clearly identified as a CBRT product, with its name and logo, and are marked with the name of the department responsible. The data sources are mentioned by all official statistical agencies when their statistics are used or reproduced. The SIS and the Treasury, among other institutions, are acknowledged as data sources through footnotes that accompany the relevant tables.

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

Major changes in methodology, source data, and statistical techniques are announced to the public on the CBRT's website at the time the changes are introduced. For example, the measurement of services and income credits in the balance of payments was revised in early 1999 and the methodology was posted on the CBRT's website at the time. When balance of payments monthly statistics are first released, data are clearly identified as preliminary and remain as such until the year-end figures are available.

The CBRT has stated that an advance notice will be given before disseminating monthly balance of payments statistics according to the standard components and classification recommended by the *BPM5*.

### **1.3 Ethical standards**

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

The CBRT Law and the Code of Conduct provide broad ethical guidelines for staff of the CBRT. The Code of Conduct of the CBRT regulates recruitment of personnel, their rights, duties and responsibilities, as well as disciplinary rules and rewards. In addition, the Code of Organization and Duties determines the area of work and responsibilities of each Department and Division of the CBRT. These guidelines are fully available to staff. When new staff join the CBRT, they participate in an orientation course that covers these guidelines thoroughly.

## **2. Methodological soundness**

### **2.1 Concepts and definitions**

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

Concepts and definitions used to compile the balance of payments statistics are in broad conformity with the guidelines presented in the *BPM5*. The most important deviations from concepts and definitions specified in the *BPM5* are identified in publications, including metadata available on the CBRT's website.

These deviations include (i) the criterion of residency underlying the treatment of enterprises operating in the free trade zones, which are not considered resident enterprises; (ii) the definition of direct investment, which does not follow the 10 percent ownership rule; and (iii) the definition of goods, which does not follow the recommended breakdown.

Foreign currency deposits held with the CBRT by Turkish citizens residing abroad (“Dresdner deposits”) are not yet treated fully in line with the requirements of the IMF template on international reserves and other foreign currency liquidity (reserve template). Currently, the CBRT includes the full amount of the Dresdner deposits under official reserves assets in the reserve template, but only registers the deposits with an original maturity of one year or less as predetermined drains. Deposits with an original and remaining maturity of one year or less should be treated as short-term predetermined drains (classified under Section II of the reserve template), and deposits with a remaining maturity of more than one year should be treated as contingent liabilities (classified in Section III of the reserve template). The authorities confirmed that they would adopt this approach starting from mid-2002, including the dissemination of an explanatory note about the nature and conditions of Dresdner deposits in the reserve template and in the metadata.

In addition, commercial banks deposits at the CBRT from reserve requirements denominated in foreign currency are included under official reserves assets in the reserve template. These deposits should also be recorded as contingent liabilities (classified in Section III of the reserve template). The authorities have also agreed to adopt this approach in the near future.

## 2.2 Scope

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

In principle, Turkey's balance of payments statistics cover all resident-nonresident transactions. Resident institutional units are defined in conformity with the *BPM5*'s concepts of economic territory, residence, and center of economic interest, except free trade zones located in Turkish territory.

## 2.3 Classification/sectorization

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

Institutional units are classified in four sectors (monetary authority, general government, banks and other sectors), according to *BPM5*. The monetary authority corresponds to the CBRT. The general government consists of the central government, public universities, and municipalities. Banks are comprised of public and private commercial banks and special finance houses. Other sector covers private companies, state economic enterprises, and households.

The classification of Turkey's monthly balance of payments statistics conforms to the requirements of *BPM4*. Nevertheless, the CBRT is providing monthly balance of payments data to the IMF's Statistics Department in broad compliance with the classification recommended by *BPM5*. The authorities state that required work for disseminating monthly balance of payments statistics according to the classification of *BPM5* will be finalized in the near future.

The main deviations of current Turkish balance of payments publications from the classification recommended by the *BPM5* are:

Goods: Turkish publications do not show a breakdown of goods under the categories recommended by the *BPM5* (general merchandise, goods for processing, repairs on goods, goods procured in port, and nonmonetary gold). Goods for processing and repairs on goods are classified under services on a net basis. Data on goods procured from ports are not compiled. Transit trade data are classified under goods (exports and imports) instead of under merchanting and other trade-related services.

Services: Most of the services items are not classified and/or disaggregated appropriately due to the lack of breakdown in the data sources. For example, communication services are not compiled in a gross basis (credit and debit) nor separated from other services; computer and information services, and royalties and license fees, are not classified appropriately. In

addition, transportation services are not disaggregated by means of transport, and insurance services on goods are included under transportation.

Income: Interest, dividends, and branch profits are classified together with other services instead of under a separate item (investment income).

Current and capital transfers: Transfers are not disaggregated and classified into current and capital transfers. The *BPM5* recommends that only current transfers be registered under the current account of the balance of payments.

Financial account: Foreign direct investment does not include, as recommended by the *BPM5*, borrowing and lending operations between direct investors and direct investment enterprises (intercompany debt transactions), nor nondistributed but nonreinvested profits. The intercompany debt transactions are classified under the other investment item of the balance of payments. Nondistributed and nonreinvested profits are not registered in the balance of payments.

## **2.4 Basis for recording**

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

Turkey's balance of payments statistics are compiled in U.S. dollars. Balance of payments transactions are collected in original currencies, and their U.S. dollar and Turkish lira equivalents, on a transaction basis. Transactions in other currencies are converted into U.S. dollars at the exchange rate prevailing on the day of transaction or, when appropriate, at the correspondent weighted average exchange rates for the reference period. Stocks in other currencies are converted into U.S. dollars at the end-month correspondent exchange rate. Where transaction estimates are derived from stock data, the stock data are revalued into their original currencies and then the change in original currency is converted into dollars at the average exchange rate for the reference period.

Transactions, where possible, are valued at market prices as recommended by the *BPM5*. Goods are valued by customs at the price actually paid. Services are valued at the price paid for the services provided. Financial transactions are also valued at market prices.

End-month stock data on public and private medium- and long-term external debt are reported at nominal values (as sourced from the Treasury). A method to transform the latter into market values has not been implemented. Monetary gold holdings are valued at a fixed price since end-2000 in the balance of payments. In accordance with the operational guidance of the reserve template, the CBRT gold reserves are valued at market value in the reserve template. CBRT security holdings are valued at face value in the balance of payments, and at market value in the reserve template.

#### *2.4.2 Recording is done on an accrual basis*

Balance of payments accounting, where possible, is done on an accrual basis. However, most balance of payments transactions are recorded on a cash basis. Transactions of goods are recorded according to customs documents, i.e., at the time they legally enter the country. Interest, dividend, and profits are recorded on a cash, not accrual, basis. Services are recorded when paid not when provided. Most transactions in the financial account are recorded when foreign exchange is paid or received.

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

Grossing/netting procedures are broadly consistent with *BPM5*. Most current account items are recorded on a gross basis. Financial account items are mainly recorded on a net basis, separately for the individual asset and liability components.

### **3. Accuracy and reliability**

#### *3.1 Source data*

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

The data sources are broadly sufficient to compile major items of the balance of payments statistics. The primary data sources employed by the CBRT to compile the monthly balance of payments statistics are (i) the trade statistics prepared by the SIS; (ii) surveys for data on travel and shuttle trade; and (iii) data from the banks' foreign exchange records for most other transactions.

Banks' foreign exchange records are collected from commercial banks and the CBRT. The *Monthly Foreign Exchange Position Report* submitted by the banks to the CBRT consists of codes established to classify all foreign exchange transactions, both for inflows and outflows. Based on the regulations related to foreign exchange transactions, most of the financial account transactions of the balance of payments can be identified. Nevertheless, major transactions of inflows of services, income, and current transfers are not identified and/or classified appropriately. The coverage of services, income, and current transfers in the balance of payments statistics is partial. The compilation of inflows from these transactions—except for travel services—is based on information provided by resident banks when foreign exchange is converted to Turkish lira. The compilation of outflows from the said transactions is based on information from foreign exchange records provided by resident banks, regardless of the conversion from Turkish lira into foreign currency. Therefore, transactions outside the domestic banking system, as well as inflows of services, income, and current transfers through the domestic banking system that did not imply foreign exchange conversion, are not captured. It is worth noting that Turkish citizens may maintain bank accounts in foreign currency, both abroad or in the domestic banking system. Therefore,

banks' foreign exchange records need to be supplemented with estimation techniques and other sources for the scope to be consistent with international standards.

The primary source data are supplemented with information from secondary data sources. These include administrative data on foreign direct investment compiled by the Treasury; public and private external debt stock data provided by the Treasury; stock data on portfolio investment of nonresidents provided by custodian banks; equity securities traded by nonresidents provided by the Istanbul Stock Exchange Market; and imports of gold provided by the Istanbul Gold Exchange Market.

The financial press is closely monitored for information on international transactions, especially for financial account transactions such as direct investment and portfolio investment. Data revisions incorporate all material changes from available up-to-date information.

**Goods:** The main source of information for merchandise trade imports c.i.f. and exports f.o.b. is the monthly data on trade flows compiled by the SIS from customs documents and from major enterprises when customs documents are not available. Adjustments are made by the CBRT to account for goods purchased in Turkey by shuttle traders for resale abroad, estimated through surveys, and to account for gold imports nonrecorded in customs.

**Transportation:** Partial data for freight credit are obtained from the banks' foreign exchange records. Data for passenger fares, excess baggage, and other transportation receipts and expenditures are also obtained from the banks' foreign exchange records. A major part of the freight credit and debit is estimated.

**Travel:** Data on travel are based on (i) quarterly sample surveys conducted since the late 1980s by a private research firm on behalf of the CBRT on the expenditures of foreign visitors in Turkey and of residents in their trips abroad; and (ii) the number of foreign visitors and of Turkish citizens traveling abroad obtained from the Ministry of Tourism. Business and personal travel are identified separately in the surveys. Estimates are computed by multiplying the number of travelers by the related average expenditure obtained from surveys. A supplementary survey is conducted in travel agencies by the same private firm to follow-up the developments in the tourism sector.

**Other services:** Data are compiled from the banks' foreign exchange records on (i) construction services; (ii) financial services; (iii) license fees; (iv) other business services, including merchanting and other trade related services; (v) operational leasing; (vi) other personal cultural and recreational services; (vii) miscellaneous business services; and (viii) government services.

**Income:** Income data on direct investment, portfolio investment, and other investment are derived from the banks' foreign exchange records. Data on reinvested earnings from direct investment in Turkey are obtained from the Treasury based on reports from direct investment

enterprises. Data on equity income are underestimated in the balance of payments as long as undistributed branch profits are not recorded.

Current transfers: The credit entries for current transfers cover grants in cash received by the general government. The source for these data is foreign exchange records of the commercial banks and the CBRT. Workers' remittances by Turkish workers residing abroad are derived from the banks' foreign exchange records. Other current transfer credits cover mainly "imports with waiver," that is imports financed by earnings of Turkish nationals living abroad. SIS compiles these data from customs documents.

Direct investment: Data on equity capital and remitted earnings are obtained from the banks' foreign exchange records. Data on reinvested earnings are obtained from the Treasury. Data on undistributed branch profits are not obtained.

Portfolio investment: Data on equity securities, bonds, and notes are derived from the banks' foreign exchange records and the CBRT. These provide a breakdown into assets and liabilities and a further breakdown by sectors.

Financial Derivatives: These instruments are not adequately compiled in balance of payments statistics.

Other investment: Data on trade credits, loans, currency and deposits, and other assets and liabilities are obtained from the banks' foreign exchange records. Data are available by sectors and by maturities except for import-related cash payments. The coverage of public external debt disbursements in the balance of payments statistics is basically limited to data on cash drawings provided by banks' foreign exchange records.

Reserve assets: Data on changes in reserve assets are derived from the foreign exchange records of the CBRT. The Financial Statistics Division of the Statistics Department is responsible for producing the international reserves data on a weekly basis. This division is also responsible for the preparation of the reserves template on a monthly basis.

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

Definition, scope, classification, valuation, and time of recording used in source data are broadly in line with *BPM5*, based, where applicable, on adjustment procedures to source data. Specific procedures are used to improve the coverage, classification, valuation, and timing of the information received by the CBRT from various data sources.

### *3.1.3 Source data are timely*

Monthly merchandise trade statistics are disseminated by the SIS within eight weeks after the end of the reference month. Commercial banks submit the *Monthly Foreign Exchange Position Report* to the CBRT via diskette or e-mail within 30 days after the end of the

reference month. Data from surveys are also timely. If exceptional delays occur, the CBRT quickly notifies the bank responsible for the delay.

### **3.2 Statistical techniques**

#### *3.2.1 Data compilation employs sound statistical techniques*

The CBRT uses data management procedures that include computerized edit checks to identify coding and other errors in source data, and to minimize processing errors of editing and coding. The monthly data on banks' foreign exchange records are checked by the CBRT on original currency and U.S. dollar equivalents through macros within the excel file. Discrepancies on those codes that link to other reporting forms are immediately notified to the bank responsible. Once all corrections are made, data are consolidated and included in the monthly balance of payments statistics.

In general, the reporting forms are clear, well designed, easy to complete, and appropriate for computer processing.

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

Merchandise imports: They are reported on a c.i.f. basis and are adjusted to an f.o.b. basis using information on transportation and insurance margins estimated by the CBRT in consultation with the SIS.

Shuttle trade: In 1996, the CBRT began to account for the shuttle trade in its official balance of payments statistics. Data on shuttle trade are obtained from surveys conducted three times a year by a private firm on behalf of the CBRT to estimate the average per capita expenditure of nonresidents traveling to Turkey for the purpose of engaging in shuttle trade. The value of shuttle trade is obtained by multiplying this figure by the related number of nonresidents engaged in this activity. The number of shuttle traders is estimated based on records of special custom exit-points provided by the Ministry of Tourism.

Freight: The data for freight credit are an estimation based on total export receipts that enter the banks' foreign exchange records. The data for freight debit are an estimation based on total imports reported by SIS.

Travel: Estimates on travel data are computed by multiplying the number of foreign visitors and of residents traveling abroad by the related average expenditure, obtained from sample surveys. Data of travelers submitted by the Ministry of Tourism are based on nationality and not on residency, but partial adjustments are made to exclude Turkish citizens living abroad from the data of residents. However, they are not included as nonresidents.

Other investment: Data on net short-term credits for imports, other than letter of credit and acceptance credits, are estimated by using a moving average of disbursements based on customs documents provided by SIS.

### ***3.3 Assessment and validation of source data***

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

Administrative records of banks' foreign exchange transactions are periodically assessed to identify and overcome, to the extent possible, problems of coverage and misclassification of transactions, particularly those related to transactions of services, income, and current transfers. Surveys on travel services and shuttle trade are also assessed periodically.

High-value transactions are confirmed with individual respondents through the reporting commercial bank. However, there is no reporting threshold for requiring verification that transactions have been correctly classified in reports submitted by banks. Large fluctuations in the values of reported transactions are investigated by the CBRT. Foreign exchange transactions between residents are monitored to avoid misrecording.

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

#### ***3.4.1 Main intermediate data are validated against other information where applicable***

Banks' foreign exchange data are validated against other independent data sources. Information reported in the financial press is used to verify high-value direct investment and other transactions. Information from independent data sources is obtained by the CBRT for (i) public and private external debt stock data provided by the Treasury; (ii) stock data on portfolio investment of nonresidents provided by custodian banks; (iii) equity securities traded by nonresidents provided by the Istanbul Stock Exchange Market; and, (iv) imports of gold provided by the Istanbul Gold Exchange Market; among others. Finally, banks' balance sheets are used to check banks' own records against related items in the monthly foreign exchange reports.

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

The behavior of some series is crosschecked with related indicators: (i) interest payments and receipts are periodically assessed in relation to the corresponding stock data; and (ii) the discrepancies between merchandise trade and the associated financial flows are reviewed.

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

The CBRT is alert to the level of the errors and omissions and seeks to understand them by crosschecks between the balance of payments statistics and monetary statistics, and between the current and financial account of the balance of payments.

Bilateral comparisons and/or reconciliations are not conducted with trade data of selected major trading partners, nor are selected external debt and financial data compared with relevant international organizations.

### **3.5 Revision studies**

#### **3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes (see also 4.4.3.)**

No formal revision studies are conducted. Nevertheless, validations are routine as part of internal quality control exercises. The public is informed of the results when revisions are significant. Preliminary data are clearly identified. The results of adjustments made in the statistical processes are considered in compiling data for subsequent periods.

## **4. Serviceability**

### **4.1 Relevance**

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

Consultations take place, when necessary, between the Balance of Payments Division and other divisions and departments of the CBRT to evaluate the relevance, consistency, and practical utility of balance of payments statistics.

The CBRT regularly participates in international balance of payments statistics courses, meetings, and seminars organized by international and regional organizations (OECD, IMF, ECB, BIS, Eurostat, among others).

### **4.2 Timeliness and periodicity**

#### **4.2.1 Timeliness follows dissemination standards**

The timeliness of the balance of payments statistics meets SDDS requirements. Turkey's monthly balance of payments statistics are disseminated within one-quarter after the end of the reference month. These figures are published in the CBRT's *Quarterly Bulletin* and on the CBRT's website. The *Quarterly Bulletin* publishes time series data (monthly data for the current and previous years and annual data for the prior 11 years), showing a detailed

breakdown of the balance of payments components. The *Balance of Payments Statistics Yearbook of Turkey* publishes similar data but in more detail, and includes trend charts.

Data on international reserves are disseminated within one week after the end of the reference week, the template on international reserves and other foreign currency liquidity is disseminated within one month after the reference month, and merchandise trade data are published within eight weeks after the end of the reference month.

#### *4.2.2 Periodicity follows dissemination standards*

Turkey compiles and disseminates monthly balance of payments data, thereby exceeding the quarterly periodicity prescribed by the SDDS for balance of payments statistics. Turkey also disseminates a range of other external sector statistics with the periodicity prescribed by the SDDS. Data on merchandise trade and on the reserve template are compiled and disseminated monthly. Data on international reserves are compiled and disseminated weekly, thereby exceeding the monthly periodicity prescribed by the SDDS for international reserves.

### *4.3 Consistency*

#### *4.3.1 Statistics are consistent within the dataset*

Concepts, definitions, and classifications for producing monthly and annual balance of payments statistics are the same. Over the long run, the net errors and omissions item has not been large, but has been unstable over time. Net errors and omissions of Turkey's balance of payments have been equivalent on average to 2 percent of total goods' exports and imports in the past five years.

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

Consistent detailed annual balance of payments statistics are available from 1984. When changes in source data, methodology, or techniques are introduced, historical series are reconstructed as far as reasonably possible. Major changes in economic trends are explained in the monthly report *Balance of Payments Developments* posted on the CBRT's website.

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

Data on foreign assets and liabilities of financial institutions are irregularly reconciled with the monetary statistics. Nevertheless, balance of payments data are not reconciled with the national accounts, nor with the GFS.

The balance of payments components comprising public and private external debt are not consistent with the corresponding debt stocks. The new work arrangement related to public and private external debt would facilitate periodic data reconciliations between the CBRT and the Treasury.

Financial flow data of the balance of payments are not reconciled with changes in the international investment position. The CBRT will promptly prepare and use on a regular basis a table explaining the differences.

#### **4.4 Revision policy and practice**

##### *4.4.1 Revisions follow a regular, well established, and transparent schedule*

There is no predetermined revision cycle of balance of payments statistics.

##### *4.4.2 Preliminary data are clearly identified*

Preliminary data are identified in balance of payments statistics releases. The revised data are disseminated with the same level of detail as previously published for the preliminary data.

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

When major revisions to balance of payments statistics are made, the revision is announced on the CBRT's website. For example, the measurement of services and income credits in the balance of payments was revised in early 1999 and the announcement posted on the CBRT's website simultaneously.

### **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 balance of payments statistics are presented in a clear manner that facilitates analysis. Datasets are published with various levels of detail. Analysis of current period developments is included in the monthly report *Balance of Payments Developments*, prepared by the Statistics Department, and in the *Monthly Economic Bulletin*, prepared by the Research Department.

The balance of payments statistics are published according to the standard components of the *BPM4*. The CBRT is planning to publish the balance of payments statistics according to the standard components of the *BPM5* beginning from January 2002. A revised monthly series will be published starting for the period 1992–2001. Balance of payments data are not published in a seasonally adjusted form.

#### *5.1.2 Dissemination media and formats are adequate*

Detailed and summary monthly data on the major components of the balance of payment are available, in both Turkish and English, on the CBRT's website. *Balance of Payments Developments* and *Monthly Economic Bulletin* are posted on the same website.

The balance of payments statistics are also published by the CBRT in hardcopy in the *Quarterly Bulletin* and *Balance of Payments Statistics Yearbook of Turkey* available free of charge. The *Quarterly Bulletin* publishes time series data (monthly data for the current and previous years and annual data for the prior 11 years), showing a detailed breakdown on the balance of payments components. The *Balance of Payments Statistics Yearbook of Turkey* publishes similar data but in more detail and includes trend charts.

#### *5.1.3 Statistics are released on a pre-announced schedule*

An Advance Release Calendar that gives the no-later-than date for the next 12 months is disseminated on the SIS's website. The calendar is updated once a year in September.

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

Balance of payments data are released simultaneously to all interested parties by posting them on the CBRT's website ([www.tcmb.gov.tr/odmedenge/odmaineng.html](http://www.tcmb.gov.tr/odemedenge/odmaineng.html)). The data available on the website are monthly and cumulative. Historical data are also available. Data are not made available to officials outside the CBRT before they are released to the public.

#### *5.1.5 Nonpublished (but nonconfidential) sub-aggregates are made available upon request*

Nonpublished but nonconfidential sub-aggregated data are promptly made available upon request.

### **5.2 Metadata accessibility**

#### *5.2.1 Documentation on concepts, scope, classifications, basis for recording, data sources, and statistical techniques is available, and differences from international standards are annotated*

Turkey's balance of payments summary methodology statement is posted on the IMF's Dissemination Standards Bulletin Board. The note *Balance of Payments Methodology and Turkey's Implementation* is available to the public in Turkish on the CBRT website.

The SDDS summary methodologies and other related metadata are regularly reviewed and updated.

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

Under the SDDS framework, metadata are presented in electronic format and detailed presentations are provided.

**5.3 Assistance to users**

*5.3.1 Contact person for each subject field is publicized*

A contact person, address, telephone, facsimile, and e-mail are identified on the IMF's Dissemination Standards Bulletin Board. Prompt and knowledgeable service is available to users of statistics. No periodic surveys of users are in place.

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

The CBRT website contains a list of publications and documents related to the balance of payments statistics that can be obtained free of charge. All dissemination formats are also identified on the IMF's Dissemination Standards Bulletin Board.

## **Dimensions and Elements of the Special Data Dissemination Standard (SDDS)**

The SDDS prescribes the following practices under each of the identified dimensions:

### **Data dimension (coverage, periodicity and timeliness)**

- the dissemination of 18 data categories, including component detail, covering the four main macroeconomic statistical categories, with prescribed periodicity and timeliness.

### **Access dimension**

- the dissemination of Advance Release Calendars providing at least a one-quarter ahead notice of approximate release dates, and at least a one-week ahead notice of the precise release dates; and
- the simultaneous release of data to all users.

### **Integrity dimension**

- the dissemination of the terms and conditions under which official statistics are produced and disseminated;
- the identification of internal government access to data before release;
- the identification of ministerial commentary on the occasion of statistical release; and
- the provision of information about revision and advance notice of major changes in methodology.

### **Quality dimension**

- the dissemination of documentation on statistical methodology and sources used in preparing statistics; and
- dissemination of component detail and/or additional data series that make possible crosschecks and checks of reasonableness.

Subscribers are required:

- to post descriptions of their data dissemination practices (metadata) on the IMF's Dissemination Standards Bulletin Board. Summary methodologies, which describe data compilation practices in some detail, are also disseminated on the Dissemination Standards Bulletin Board.

- to maintain an Internet website, referred to as the National Summary Data Page, which contains the actual data described in the metadata, and to which the Dissemination Standards Bulletin Board is electronically linked.

At its March 29, 2000 meeting on the Third Review of the Data Standard Initiatives, the Executive Board of the IMF approved the incorporation of a new SDDS data category on external debt. The transition period for implementing this data category expires in March 2003. Directors also confirmed the transition period for data on the international investment position to expire on December 31, 2001 and approved the timeliness to be of a maximum of nine months.

As a result of this meeting, the IMF staff also began monitoring observance of the standard through subscribers' National Summary Data Pages maintained on the Internet. Monitoring commenced from July 2000, and is limited to the coverage, periodicity, and timeliness of the data, and to the dissemination of Advance Release Calendars.

**Data Quality Assessment Framework—Generic Framework**  
 (November 2001)

Quality Dimensions	Elements	Indicators
<b>0. Prerequisites of quality<sup>1</sup></b>  <i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i>	<p><b>0.1 Legal and institutional environment</b>—<i>The environment is supportive of statistics.</i></p> <p><b>0.2 Resources</b>—<i>Resources are commensurate with needs of statistical programs.</i></p> <p><b>0.3 Quality awareness</b>—<i>Quality is a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, processing, and disseminating statistics is clearly specified.      0.1.2 Data sharing and coordination among data producing agencies are adequate.      0.1.3 Respondents' data are to be kept confidential and used for statistical purposes only.      0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.</p> <p>0.2.1 Staff, financial, and computing resources are commensurate with statistical programs.      0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 Processes are in place to focus on quality.      0.3.2 Processes are in place to monitor the quality of the collection, processing, and dissemination of statistics.      0.3.3 Processes are in place to deal with quality considerations, including tradeoffs within quality, and to guide planning for existing and emerging needs.</p>
<b>1. Integrity</b>  <i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i>	<p><b>1.1 Professionalism</b>—Statistical policies and practices are guided by professional principles.</p> <p><b>1.2 Transparency</b>—<i>Statistical policies and practices are transparent.</i></p> <p><b>1.3 Ethical standards</b>—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are compiled on an impartial basis.      1.1.2 Choices of sources and statistical techniques are informed solely by statistical considerations.      1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.      1.2.2 Internal governmental access to statistics prior to their release is publicly identified.      1.2.3 Products of statistical agencies/units are clearly identified as such.      1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.</p> <p>1.3.1 Guidelines for staff behavior are in place and are well known to the staff.</p>

**Data Quality Assessment Framework—Generic Framework**  
**(November 2001)**

Quality Dimensions	Elements	Indicators
<p><b>2. Methodological soundness</b></p> <p><i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i></p>	<p><b>2.1 Concepts and definitions—</b>  <i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i></p> <p><b>2.2 Scope—</b><i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p><b>2.3 Classification/sectorization—</b>  <i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p><b>2.4 Basis for recording—</b>  <i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices.</i></p>	<p>2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices: see dataset-specific framework.</p> <p>2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework.</p> <p>2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices: see dataset-specific framework.</p> <p>2.4.1 Market prices are used to value flows and stocks.</p> <p>2.4.2 Recording is done on an accrual basis.</p> <p>2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.</p>

**Data Quality Assessment Framework—Generic Framework**  
**(November 2001)**

<b>Quality Dimensions</b>	<b>Elements</b>	<b>Indicators</b>
<p><b>3. Accuracy and reliability</b>   <i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.</i></p>	<p><b>3.1 Source data</b>—<i>Source data available provide an adequate basis to compile statistics.</i></p> <p><b>3.2 Statistical techniques</b>—<i>Statistical techniques employed conform to sound statistical procedures.</i></p> <p><b>3.3 Assessment and validation of source data</b>—<i>Source data are regularly assessed and validated.</i></p> <p><b>3.4 Assessment and validation of intermediate data and statistical outputs</b>—<i>Intermediate results and statistical outputs are regularly assessed and validated.</i></p> <p><b>3.5 Revision studies</b>—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p>	<p>3.1.1 Source data are collected from comprehensive data collection programs that take into account country-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.</p> <p>3.1.3 Source data are timely.</p> <p>3.2.1 Data compilation employs sound statistical techniques.</p> <p>3.2.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.</p> <p>3.3.1 Source data—including censuses, sample surveys and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide planning.</p> <p>3.4.1 Main intermediate data are validated against other information where applicable.</p> <p>3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other potential indicators of problems in statistical outputs are investigated.</p> <p>3.5.1 Studies and analyses of revisions are carried out routinely and used to inform statistical processes.</p>

**Data Quality Assessment Framework—Generic Framework**  
**(November 2001)**

<b>Quality Dimensions</b>	<b>Elements</b>	<b>Indicators</b>
<p><b>4. Serviceability</b> <i>Statistics are relevant, timely, consistent, and follow a predictable revisions policy.</i></p>	<p><b>4.1 Relevance</b>—<i>Statistics cover relevant information on the subject field.</i></p> <p><b>4.2 Timeliness and periodicity</b>—<i>Timeliness and periodicity follow internationally accepted dissemination standards.</i></p> <p><b>4.3 Consistency</b>—<i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p><b>4.4 Revision policy and practice</b>—<i>Data revisions follow a regular and publicized procedure.</i></p>	<p>4.1.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.</p> <p>4.2.1 Timeliness follows dissemination standards. 4.2.2 Periodicity follows dissemination standards</p> <p>4.3.1 Statistics are consistent within the dataset (e.g., accounting identities observed). 4.3.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.3.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.</p> <p>4.4.1 Revisions follow a regular, well-established and transparent schedule. 4.4.2 Preliminary data are clearly identified. 4.4.3 Studies and analyses of revisions are made public.</p>

**Data Quality Assessment Framework—Generic Framework**  
**(Draft as of July 2001)**

Quality Dimensions	Elements	Indicators
<p><b>5. Accessibility</b></p> <p><i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p><b>5.1 Data accessibility</b>—<i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p><b>5.2 Metadata accessibility</b>—<i>Up-to-date and pertinent metadata are made available.</i></p> <p><b>5.3 Assistance to users</b>—<i>Prompt and knowledgeable support service is available.</i></p>	<p>5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts).</p> <p>5.1.2 Dissemination media and formats are adequate.</p> <p>5.1.3 Statistics are released on the pre-announced schedule.</p> <p>5.1.4 Statistics are made available to all users at the same time.</p> <p>5.1.5 Nonpublished (but nonconfidential) sub-aggregates are made available upon request.</p> <p>5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines or good practices are annotated.</p> <p>5.2.2 Levels of detail are adapted to the needs of the intended audience.</p> <p>5.3.1 Contact person for each subject field is publicized.</p> <p>5.3.2 Catalogues of publications, documents, and other services, including information on any charges, are widely available.</p>

<sup>1</sup> The elements and indicators included here bring together the “pointers to quality” that are applicable across the five identified dimensions of data quality.

Table 3.1 Data Quality Assessment Framework:  
Summary Presentation of National Accounts

Country: Turkey

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>Practices of quality</b>						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality awareness		X				
<b>Professionalism</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>Classification of National Accounts</b>						
2.1 Concepts and definitions			X			The national accounts follow 1968 SNA. Accounts for the institutional sectors are not compiled.
2.2 Scope			X			
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>Accuracy and precision</b>						
3.1 Source data			X			Annual surveys are not timely. Business register is not updated systematically. Base year of constant price estimates (1987) is obsolete. Level of compilation is too aggregated.
3.2 Statistical techniques			X			
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs			X			
3.5 Revision studies	X					No study of statistical discrepancy to detect bias in GDP estimates.
<b>Reliability</b>						
4.1 Relevance		X				Revisions are small on account of revision policy and limited use of annual data.
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice			X			
<b>Accessibility</b>						
5.1 Data accessibility		X				Revision period (one year) is too short.
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Note: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed;  
LNO = Practice Largely Not Observed; NO = Practice Not Observed

Table 3.2 Data Quality Assessment Framework:  
Summary Presentation of Consumer Price Index (CPI)

Country: Turkey

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>1. Preconditions of quality</b>						
0.1 Legal and institutional environment		X				
0.2 Resources		X	X			Computer shortage.
0.3 Quality awareness		X				
<b>1.1 Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and Reliability</b>						
3.1 Source data			X			The CPI is overdue for a revision of its basket items and weights.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies	X					Data final when first published.
<b>4. Usability</b>						
4.1 Relevance		X				
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
<b>5. Disclosure</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Note: NA= Not Applicable; O = Practice Observed; LO = Practice Largely Observed;  
LNO = Practice Largely Not Observed; NO = Practice Not Observed

**Table 3.3. Data Quality Assessment Framework:  
Summary Presentation of Producer Price Index**

Country: Turkey

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>Prerequisites of quality</b>						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality awareness		X				
<b>1. Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>2. Methodological soundness</b>						
2.1 Concepts and definitions			X			Agricultural prices are wholesale prices.
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>3. Accuracy and Reliability</b>						
3.1 Source data			X			The PPI is overdue for a revision of the product composition and weights.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies	X					Data final when first published.
<b>4. Serviceability</b>						
4.1 Relevance		X				
4.2 Timeliness and periodicity		X				
4.3 Consistency		X				
4.4 Revision policy and practice		X				
<b>5. Accessibility</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Note: NA= Not Applicable; O = Practice Observed; LO = Practice Largely Observed;  
LNO = Practice Largely Not Observed; NO = Practice Not Observed

**Table 3.4. Data Quality Assessment Framework:  
Summary Presentation of Government Finance Statistics  
Country : Turkey**

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>Prerequisites of quality</b>						
0.1 Legal and institutional environment				X		The responsibility and authority for collecting, processing, and disseminating statistics is not clearly assigned to one agency, and is carried out as an incidental activity to other government functions.
0.2 Resources		X				
0.3 Quality awareness		X				
<b>Intermediate</b>						
1.1 Professionalism		X				The terms and conditions governing the collection, processing, and dissemination of government finance statistics are not documented and publicized.
1.2 Transparency			X			
1.3 Ethical standards		X				
<b>Methodological soundness</b>						
2.1 Concepts and definitions			X			Government finance statistics are compiled on an approximate GFSM 1986 basis. The scope of sub-annual data is restricted to the budget sector.
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
<b>Accuracy and Reliability</b>						
3.1 Source data			X			Data collection for the nonbudget sector is very difficult because a variety of nonstandard accounting systems are used.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies	X					

**Table 3.4. Data Quality Assessment Framework:  
Summary Presentation of Government Finance Statistics  
Country : Turkey**

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>4. Serviceability</b>						
4.1 Relevance			X			There is little knowledge or use of broad-based (i.e., extending beyond the budget) government finance statistics, possibly because such statistics cannot be produced easily, or on a timely-enough basis for effective use.
4.2 Timeliness and periodicity		X		X		Deficit/surplus and financing measurement are not on the same accounting basis. Reconciliations are not systematically carried out with related statistics from the financial institutions and balance of payments systems.
4.3 Consistency						Preliminary and revised data are not clearly identified.
4.4 Revision policy and practice			X			
<b>5. Accessibility</b>						
5.1 Data accessibility			X			There is no single place in which to find complete and comprehensive data.
5.2 Metadata accessibility				X		Very little information is disseminated on concepts, sources, and methods.
5.3 Assistance to users		X				

Note: NA= Not Applicable; O = Practice Observed; LO = Practice Largely Observed;  
LNO = Practice Largely Not Observed; NO = Practice Not Observed

Table 3.5. Data Quality Assessment Framework:  
Summary Presentation of Monetary Statistics<sup>1/</sup>

Country: Turkey

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>Prerequisites of quality</b>						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality awareness		X				
<b>Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>Methodology</b>						
2.1 Concepts and definitions		X				In analytical accounts on nonfinancial private corporations, households and some nonbank financial institutions are aggregated into "private sector." Data on financial derivatives are not included. Market valuation is not always applied. Foreign currency-denominated stocks are converted into national currency using only the buying rate.
2.2 Scope		X				
2.3 Classification/sectorization			X			
2.4 Basis for recording			X			
<b>Accuracy and Reliability</b>						
3.1 Source data		X				
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
<b>Timeliness</b>						
4.1 Relevance		X				Flexibility option is needed to meet SDDS timeliness requirement. Consistency checks with government finance and balance of payments statistics are rarely done.
4.2 Timeliness and periodicity			X			
4.3 Consistency			X			
4.4 Revision policy and practice		X				
<b>Data accessibility</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Note: NA= Not Applicable; O = Practice Observed; LO = Practice Largely Observed;  
LNO = Practice Largely Not Observed; NO = Practice Not Observed

<sup>1/</sup> Assessment using the Depository Corporations Survey as the reference point.

Table 3.6. Data Quality Assessment Framework:  
Summary Presentation of Balance of Payments

Country: Turkey

Elements	NA	Assessments				Comments
		O	LO	LNO	NO	
<b>Prerequisites of quality</b>						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Quality awareness		X				
<b>Integrity</b>						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
<b>Methodological soundness</b>						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization			X			Classification is mainly based on <i>BPM4</i> . Services/income recorded on cash basis.
2.4 Basis for recording			X			
<b>Assessment and Reliability</b>						
3.1 Source data			X			Source data for some services and direct investment transactions are partial.
3.2 Statistical techniques		X				
3.3 Assessment and validation of source data		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				
<b>Serviceability</b>						
4.1 Relevance		X				Limited reconciliation processes with other macroeconomic data.
4.2 Timeliness and periodicity		X				
4.3 Consistency			X			
4.4 Revision policy and practice		X				
<b>Accessibility</b>						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Note: NA= Not Applicable; O = Practice Observed; LO = Practice Largely Observed;  
LNO = Practice Largely Not Observed; NO = Practice Not Observed

## User Survey

### A. Summary of Results of Survey of Data Users

At the request of the mission, the Treasury sent a questionnaire to users among academics, media, embassies, international banks, and public sector agencies, seeking their views on Turkish macroeconomic statistics. Sixty-four responses were received directly from recipients outside the public agencies (including 11 academics, 7 media, 12 embassies, 14 international banks, and 17 domestic banks) and 60 from recipients in the public agencies. Many major players in the international financial and diplomatic community were well represented amongst the respondents.

These respondents' views were very largely positive. Twelve of the nonpublic agency direct respondents consider Turkish statistics to be "very good," and 45 consider them "good;" these categories together thus cover around 90 percent of those who responded. Six of these respondents consider the statistics "unsatisfactory," and one (embassy) considers them "bad." Among the international banks, 3 consider the statistics "very good," 10 consider them "good," and 1 considers them "unsatisfactory." Among the respondents in the public sector, of those who gave a summary rating, 12 consider the statistics "very good," 40 consider them "good," and 3 consider them "unsatisfactory," and 1 considers them "bad."

It is not possible to detect significant differences in evaluations of Turkish statistics between the various sectors of statistics. More problems were reported on coverage, accuracy, and (particularly for the SIS statistics) ease of access to the data than on the other characteristics surveyed. It is not easily possible to detect an overall pattern in these observations. A number of specific comments were provided by respondents, especially by some of those outside the public agencies who were positive overall about the Turkish statistics. A selected set of these comments is provided below.

### B. Comments of Respondents of User Survey

- Very impressive statistics (several comments on these lines).
- Amongst the best in the world.
- Impressive, but the time of data releases sometimes remains uncertain.
- Statistics very transparent.
- Timeliness is perhaps one area where further progress would be appreciated.
- In general, accessibility is good (very good in comparison with other emerging markets), but the SIS website is difficult to use.
- Access to SIS data on Internet not always easy to follow (several comments).

- Accessibility in general satisfactory, but when more help is needed, it may need the approval of senior management to reveal that information.
- Significant delays are experienced when we demand specific statistics from the SIS.
- Statistics in Turkish are better than those in English.
- Discrepancies are sometimes found in data provided between different government sources; better compatibility amongst resources providing data may improve quality of statistics in Turkey in general. (Several comments on these lines, including examples of different numbers for identical series from different sources<sup>12</sup>.)
- Methodology generally satisfactory, but Treasury guarantee statistics might be better explained.
- Balance of payments methodology explanation by the CBRT was encouraging.
- Information on the methodology of statistics not made public (several comments).
- National accounts statistics do not include some details, perhaps because 1993 SNA is not yet adopted.
- Never understood why it takes one month longer to compile Q1 national accounts.
- Insufficient information on household expenditure statistics, manufacturing industry, and agricultural production.
- Coverage and accuracy of national accounts from the income side could be improved (several comments).
- The coverage of the “basket” used in price indices should be improved so that quality improvements and changes in consumption patterns are better reflected.
- More work should be done on core inflation statistics (several comments).
- On the fiscal side, coverage, detail, frequency, and timeliness are not satisfactory on the public sector except that for the consolidated budget; there are no high frequency data (several comments on these lines).
- Would prefer more detail in the fiscal statistics; fiscal statistics could be posted more clearly (these are critical for Turkey).

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<sup>12</sup> For instance, the reserve money number for 1998 from CBRT and Treasury sources.

- There has not been a systematic presentation of quasi-fiscal expenditures (less of a problem in the last two years).
- Balance of payments statistics should be released with a shorter delay (several comments).
- For the balance of payments, some “other” items are significant in value.
- No details on imports and exports of services, or of balance sheets of foreign exchange offices.
- SIS and CBRT cannot evaluate the data gathered from different units properly and quickly; for instance, from time to time there are important differences between recorded export figures and customs data.
- Capital flows and export numbers are revised frequently. Changes in balance of payments statistics are normal, but should be explained.
- Would like to see real effective exchange rate data based on relative unit labor costs.
- More weekly and monthly statistics are needed.
- More statistics would be helpful on monthly personal income, wholesale orders, retail sales, and employment statistics.
- More sectoral breakdown of foreign trade statistics would be helpful.
- Further details of the composition of domestic debt, and details of debt service, would be helpful. (Several comments.)
- High frequency unemployment and lending rates would be useful (several comments regarding each of these).
- More information needed on production and expectations.
- Would like information on market sentiment, and a consumer confidence index (several comments).
- Largest deficiency is on statistics that could be leading indicators; for example, inventory changes, nonfarm payrolls (several comments).
- Central bank balance sheet could be compiled by the following day.
- Public sector borrowing requirement needed month-on-month.
- Better data needed on nonbudgetary fiscal accounts.

- Content of balance of payments "net errors and omissions" not clear.
- Would like domestic debt figures broken down by fixed and floating rate, and by local and foreign currency.
- National accounts still based on *1968 SNA*; base year should be revised as a recent year.
- Base year for CPI should be revised to reflect current expenditure basket.

In addition, the Association of Turkish Industrialists and Businessmen surveyed its members. These provided a somewhat less strong—although still positive—view of Turkish statistics. Of the 39 respondents who provided a summary grade, one thought the statistics "very good," 25 rated them "good," 12 rated them "unsatisfactory," and one rated them "bad." The Union of Chambers of Commerce and Industry also conducted a survey: these results are not fully comparable with the other surveys, since only summary results were passed onto the mission and aggregation is on the basis of number of sectors covered rather than individual respondents. In this case, views of Turkish statistics were markedly less strong than in the cases of the surveys conducted earlier, with only around 50 percent of the sample rating the statistics "very good" or "good," and around 6 percent rating them "bad." For the 175 sectors in the survey where a summary grade was provided, one rated Turkish statistics "very good," 73 rated them "good," 90 rated them "unsatisfactory," and 6 rated them "bad."