

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

This Report on the Observance of Standards and Codes on Data Module for 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 September 3, 2009. 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 to 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

Prepared by the Statistics Department

Approved by Adelheid Bürgi-Schmelz and Marek Belka

September 3, 2009

This data module of the Report on the Observance of Standards and Codes (ROSC) provides an updated assessment of Turkey's macroeconomic statistics, following that undertaken in the data ROSC prepared in October 2001 and published in March 2002. Both provide assessments of national practices in the production of macroeconomic data against the Special Data Dissemination Standard and the IMF's Data Quality Assessment Framework (DQAF, July 2003). The DQAF lays out internationally accepted practices in statistics, ranging from good governance in data producing agencies to practices specific to datasets.

The datasets assessed in this report are the national accounts, consumer prices, producer prices, government finance, monetary, and balance of payments statistics. The agencies that compile the datasets assessed in this report are the Turkish Statistical Institute, the Central Bank of the Republic of Turkey, the Ministry of Finance, the Undersecretariat of the Treasury, and the State Planning Organization.

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

Turkish Statistical Institute: (<http://www.turkstat.gov.tr>)

Ministry of Finance: (<http://www.muhasabat.gov.tr/indexE.php>)

Under Secretariat of the Treasury: (<http://www.treasury.gov.tr/>)

State Planning Organization: (<http://www.dpt.gov.tr/ing/>)

Central Bank of the Republic of Turkey: (<http://www.tcmb.gov.tr/yeni/eng/>)

This report is based on information provided before and during the mission that took place during November 3–17, 2008, as well as publicly available information. The team comprised Mr. Rosales (Head), Ms. Kester, Messrs. Khay and Valdivia-Velarde (all STA), Messrs. Harvey and Smith (Experts), and Ms. Ellis (Administrative Assistant, AFR).

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ACRONYMS

<i>1993 SNA</i>	<i>1993 System of National Accounts</i>
<i>1995 ESA</i>	<i>1995 European System of Accounts</i>
BOP	Balance of payments
<i>BPM5</i>	<i>Balance of Payments Manual, fifth edition</i>
<i>BPM6</i>	<i>Balance of Payments and International Investment Position Manual, Sixth edition</i>
BRSA	Banking Regulation and Supervision Agency
CBRT	Central Bank of the Republic of Turkey
COICOP	Classification of individual consumption by purpose
CPI	Consumer price index
DOTS	Direction of Trade Statistics
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board
EU	European Union
EUROSTAT	Statistical Office of the European Communities
FDI	Foreign direct investment
GDP	Gross domestic product
GFS	Government finance statistics
<i>GFSM 1986</i>	<i>A Manual on Government Finance Statistics 1986</i>
<i>GFSM 2001</i>	<i>Government Financial Statistics Manual 2001</i>
GNI	Gross national income
HBS	Household budget survey
IIP	International investment position
ISWGNA	Intersecretariat Working Group on National Accounts
ISL	Institutional sector list
ITRS	International Transactions Recording System
JEDH	Joint External Debt Hub
MFS	Monetary and financial statistics
MFSM	<i>Monetary and Financial Statistics Manual</i>
MOF	Ministry of Finance
MPC	Monetary Policy Committee
NACE Rev 1.1	Statistical Classification of Economic Activities in the European Community Revision 1.1
OECD	Organization for Economic Cooperation and Development
OSP	Official Statistics Program
PFMCL	Public Financial Management Control Law
PPI	Producer price index
PRODCOM	System for the collection and dissemination of statistics on the production of manufactured goods.
ROSC	Report on Observance of Standards and Codes
SDDS	Special Data Dissemination Standard
SPO	State Planning Organization
Treasury	The Undersecretariat of Treasury
Turkstat	Turkish Statistical Institute

I. OVERALL ASSESSMENT

1. The macroeconomic statistics are generally of high quality, broadly conforming to international standards for compilation and dissemination, and reflecting considerable improvement since the 2001 data ROSC. However, some scope for improvement remains, including on the accuracy and reliability of the national accounts and the government finance statistics (GFS), coverage of the consumer and producer price indices (CPI, PPI), timeliness of the accounts of the banking sector, and ease of access to documentation for fiscal and monetary data. Many of the actions needed for further progress are already underway or envisaged in the Official Statistics Program 2007-11, the product of a large-scale process of consultation that began in 2006 after the enactment of new statistics legislation.

2. Recent progress in data quality reflects the authorities' commitment to set statistical development on a high and sustainable path, and to address remaining challenges. A cornerstone of this effort is the more robust framework established by the new Statistics Law of Turkey (No. 5429) of November 2005. This law assigned compilation responsibilities for a broad range of official data, including macroeconomic statistics. With compilation responsibilities more clearly defined, Turkstat is coordinating the planning for data improvement within a disciplined timetable. The law endowed the Turkish Statistical Institute (Turkstat) with a lead role in taking the statistical system forward, explicitly enshrining principles to sustain transparency and integrity. Also, it strengthened the institutional support for statistics by creating a coordinating mechanism (the Statistical Council) and devices to guide and monitor progress (the Official Statistics Program (OSP) and the Strategic Plan). This more robust institutional framework includes users' feedback and access to review compilation practices.

3. Progress also has taken the form of a paradigm shift in methodology, implementation of more advanced techniques and extensive source data, and greater attention to user needs. On methodological progress, the national accounts now conform to *1995 European System of Accounts (1995 ESA)*, the balance of payments (BOP) more closely observes the *5th Edition of the Balance of Payment Manual (BPM5)*, the monetary and financial statistics (MFS) adhere to the *Monetary and Financial Statistics Manual (MFSM)*, and the government finance statistics (GFS) are in transition to the *Government Finance Statistical Manual 2001 (GFSM 2001)*. On techniques, compilation of the national accounts now uses annual chain volume measures, and the CPI and PPI also have been converted to annual chain indices. Users benefit from improved access to more and higher frequency macroeconomic data through electronic means. Against this backdrop of considerable success in increasing the volume and frequency of data, compilers of fiscal data face the challenge of further intensifying inter-agency cooperation, including to ensuring propagation of new practices and know-how, and for users to be adequately cautioned about the various vintages of data spanning different periodicities, organizing criteria, and intended uses. While resources are broadly adequate, some supplementation might be needed in future to keep up with the fast pace of improvement.

4. While good statistical work has a long tradition in Turkey, several factors have converged this decade to give strong impetus to the creation of a basis for rapid progress. The

authorities' interest in accession to the European Union (EU) has led to extensive work aimed at achieving comparability with the EU statistical system and meeting requirements specified in Chapter 18 of the Aquis Communautaire. This system-wide effort has been assisted by EU financial and technical support, which has contributed to advances in the national accounts. Sound policies adopted in the aftermath of the 2001 crisis facilitated a robust and sustained economic expansion through mid-2008. This along with considerable investment inflows have further increased the demand by policymakers and other users for high-frequency and accurate macroeconomic data. Successive programs with the Fund this decade also reinforced interest in key data to formulate policy and assess macroeconomic performance and vulnerabilities. The convergence of these factors has contributed to a consensus that efforts at statistical progress are a priority. While the EU effect is likely to be continuing, additional challenges will have to be met as new data needs emerge, the financial markets develop further, and statistical standards continue to evolve.

5. Attention to user needs and good dissemination practices are supported by observance of the Special Data Dissemination Standard (SDDS). Turkey subscribed to the SDDS on August 8, 1996 and started posting its metadata on the IMF's Dissemination Standards Bulletin Board (DSBB) on July 20, 2001. Turkey is in observance of the SDDS, meeting specifications for coverage, periodicity, timeliness, and dissemination of advance release calendars, and exceeding specifications in some areas. Turkey uses flexibility options on the timeliness of the analytical accounts of the banking sector. For all datasets, summary up-to-date methodological statements are posted on the DSBB. Appendix I provides an overview of dissemination practices compared with the SDDS.

6. Based on the IMF's Data Quality Assessment Framework (DQAF), the mission has arrived at the following conclusions:

7. **Prerequisites of quality and assurances of integrity**

- The activities of the **Turkish Statistical Institute (Turkstat)** are amply supported by a new law that embeds modern principles to guide the activities of the national statistical system. The new Statistical Council, which is chaired by the President of Turkstat and includes leading officials of key compiling ministries and agencies and relevant private sector representatives, is helping to impart priority to agreed objectives set out in the OSP. In this context, agencies responsible for the macroeconomic statistics generally collaborate effectively to comply with key national (budget formulation and macroeconomic planning) and international objectives linked to the process of EU accession and Turkey's relationship with the Fund and the rest of the international community. Turkstat's guiding role is facilitated by the work of its boards tasked with Data Quality Control and Publication and Dissemination, which promote systematic use of best practices.
- The legal and institutional environment under which the **Ministry of Finance (MOF), the Undersecretariat of the Treasury (Treasury), and State Planning Organization (SPO) of the Prime Minister's Office** compile government finance statistics remains complex but supportive. This is because of the challenging nature of

tasks. While the MOF has responsibility for compiling data on the general government, Treasury is responsible for data on financing and debt. In addition, the OSP assigns the SPO responsibility for producing data on the consolidated operations of the public sector. Responsibilities are clearly defined and the work of the Treasury and MOF is well coordinated for existing compilation activities. Nevertheless, intensified collaboration could help expedite an integrated approach to fiscal data compilation coordinated by one agency and facilitate ongoing methodological development (including use of a single chart of accounts and uniform economic and functional classifications by all levels of government and public entities). Compilation is objective, impartial and supported by ethical guidelines in laws and regulations.

- The 1970 Law of the **Central Bank of the Republic of Turkey (CBRT)** was amended in 2001 to strengthen its independence, and the 2005 Statistics Law further buttressed the CBRT's framework for effective data production. The CBRT has a tradition of data dissemination for the benefit of policymakers and the public. Following the 2001 amendment, preparations began for an inflation targeting regime (IT), which was adopted in early 2006. The strong emphasis placed by IT on transparency and publication of information further solidified discipline in the dissemination of statistics and the commitment to provide the public with assurances of integrity. The Council of Ministers appoints the Governor of the CBRT (also the Chairman of the Monetary Policy Committee) for a renewable term of five years. Data production is under the responsibility of a department dedicated exclusively to statistics, which supports good performance. The CBRT maintains close relations with relevant agencies, including the Banking Regulation and Supervision Agency (BRSA). Resources are commensurate with current tasks, although some supplementation will likely be needed in view of laudably ambitious plans. Emphasis on quality is high, as reflected by the promotion of training and research and an ongoing search for avenues for improvement. The CBRT recruits qualified staff, and promotes professionalism and ethical standards.

8. The **methodological foundations** of the macroeconomic statistics are generally sound and reflect substantial improvement since the 2001 data ROSC. Following a recent significant upgrade, the national accounts have achieved close alignment with the *1995 ESA*, and work is underway to extend their scope to incorporate the sequence of accounts for the total economy, annual supply and use tables, and institutional sector accounts. The CPI and the PPI generally conform to international standards, although the CPI lacks a component to represent owner-occupied housing. The PPI is compiled only by product (and not by economic activity) and its scope could be expanded to include exports and services. Compilation of the GFS is already in transition from the guidelines in the *Manual on Government Finance Statistics 1986 (GFSM 1986)* toward those in the more ambitious *1995 ESA* and *GFSM 2001*, with the MOF leading the way. The MOF has begun compiling *GFSM 2001*-consistent data for the central government, but it has yet to incorporate local government units and social security institutions to compile general government data, and the data on local government total debt could be improved further. In the interim, three agencies prepare various fiscal aggregates mostly on mixed bases (i.e., cash/accrual), but users are

well-served by a wealth of data. Commendably, the data prepared by the SPO cover the consolidated operations of the public sector. For the national accounts, price, and government finance statistics, the remaining challenges in coverage appear manageable with remedial action already planned or underway in most cases. Both the MFS and the BOP statistics are underpinned by international best practice, although some transactions in the BOP continue to be recorded on a cash basis and asset classification in the MFS needs further improvement, albeit with a narrower scope than in 2001.

9. While the **accuracy and reliability** of the BOP have improved in recent years, the national accounts and the GFS could be buttressed further by more timely use of additional data sources. From heavy reliance on banking records in 2001, the CBRT has since made substantial progress in the use of surveys. The national accounts could benefit from the incorporation of data from annual collections, the development of independent estimates of household consumption, the collection of quarterly information on inventory changes, and further enhancement of estimates for the non-observed economy. Such work would provide a higher level of confidence in estimates of the components of aggregate demand and national saving. The main challenge for the GFS is the need to use effectively the timely data that have become available with the introduction of the centralized automated *say 2000i* information system, which records the financial transactions of the central government. Transforming these source data with appropriate adjustments would facilitate compilation of the general government statistics. Source data for the MFS are of high quality, but extensive and rigorous reporting requirements on banks give rise to a long lag in data submission to the CBRT. For some datasets, revision studies are seldom prepared and generally not published.

10. **Serviceability** of the macroeconomic statistics is very good in most cases. Most notably, the service to the users of CBRT data is excellent, with weekly periodicity for the MFS and the timeliness and periodicity of the BOP statistics exceeding SDDS prescriptions. In addition, the reconciliation of the BOP data with stocks has been facilitated by the dissemination of the annual International Investment Position (IIP) starting in 2002, with monthly IIP indicators published since April 2008. Publication of the data on depository corporations falls short of SDDS timeliness prescriptions, although an entitled flexibility option is taken. Macroeconomic data are consistent within the dataset and over time, but insufficient efforts are made by most compiling units to ensure inter-dataset consistency.

11. Significant resources and the focus devoted to **accessibility** of macroeconomic data have yielded good results, but further improvement would be welcome. There are no seasonally adjusted national accounts or BOP estimates, and there is a need for more detail such as quarterly income components of GDP, GDP per capita, GDP per person employed, and implicit price deflators. There is insufficient guidance to GFS users on the various aggregates produced for similar concepts. For instance, the MOF disseminates separate datasets on the central government and the local government, with unconsolidated accounts of these two levels of government. In contrast, the SPO publishes consolidated data on the general government and the public sector. On the positive side, major publications by the SPO, MOF, Treasury, and the CBRT provide analyses based on published data. Such publications include the Inflation Reports and the Medium-Term Program (including the Medium-Term Fiscal Framework). For most datasets, detailed data and good metadata are

readily available in various formats and statistics are disseminated according to a pre-announced calendar. Unpublished nonconfidential data are generally made available to users upon request. Publications and web pages list contact information, publications, and other services. Commendably, the weekly monetary data are provided with ample detail and multiple formats (including in “the framework of the Stand-By-Agreement with the Fund”).

12. Section II of this report provides a summary assessment of data quality by agency and dataset. This is followed by staff recommendations in Section III. The authorities’ response to this report and a volume of detailed assessments are presented in separate documents.

II. ASSESSMENT BY AGENCY AND DATASET

13. Assessments of the quality of six macroeconomic datasets—national accounts, consumer price, producer price, government finance, monetary, and balance of payments statistics—were conducted using the Data Quality Assessment Framework (DQAF, July 2003). In this section, the results are presented at the level of the DQAF elements and using a four-point rating scale (Table 1). Assessments of the prerequisites of data quality and the assurances of integrity (Dimensions “0” and “1” of the DQAF) are presented in Tables 2a–d. For each dataset, the assessment of methodological soundness, accuracy and reliability, serviceability, and accessibility (Dimensions “2” to “5” of the DQAF) are shown in Tables 3a–f.

14. To inform its assessment, the mission conducted a user survey and interviewed selected users eliciting views on the macroeconomic statistics. While survey responses and interviews were few (13 survey responses and six additional interviews), results confirmed the findings of the 2001 data ROSC mission and those of the User Satisfaction Survey conducted by Turkstat in 2004. In particular, there was overall satisfaction with the macroeconomic statistics, although users aspired to more detail, better timeliness, and more robust inter-dataset consistency. Users appeared to be more satisfied with price, monetary, and balance of payments statistics. They saw more scope for improvement in the publication of the national accounts (particularly coverage and detail) and in the GFS (data on local governments and social security funds as well as metadata). Users were interested in more frequency for the GFS and better timeliness for the national accounts, balance of payments, and government finance statistics. Interest in greater timeliness came with readiness to accommodate more revisions under a clear policy of revisions, with respondents pointing to the need for more information on such policies. Users were aware of advance release calendars, except in the case of the GFS. All users obtained data through websites and virtually all were satisfied with data accessibility, except for a fifth of the users of the national accounts. Many respondents pointed to a need for better access to metadata and improved user support.

Table 1. Turkey: Data Quality Assessment Framework—Summary Results

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

Datasets	National Accounts	Consumer Price Index	Producer Price Index	Government Finance Statistics	Balance of Payments	Monetary Statistics
Dimensions/Elements						
0. Prerequisites of quality						
0.1 Legal and institutional environment	O	O	O	O	O	O
0.2 Resources	O	O	O	O	O	O
0.3 Relevance	O	O	O	O	O	O
0.4 Other quality management	O	O	O	O	O	O
1. Assurances of integrity						
1.1 Professionalism	O	O	O	O	O	O
1.2 Transparency	O	O	O	O	O	O
1.3 Ethical standards	O	O	O	O	O	O
2. Methodological soundness						
2.1 Concepts and definitions	O	O	LO	O	O	O
2.2 Scope	LO	LO	LO	LO	O	O
2.3 Classification/sectorization	O	O	O	O	O	LO
2.4 Basis for recording	O	LO	O	O	LO	O
3. Accuracy and reliability						
3.1 Source data	LO	O	O	O	O	O
3.2 Assessment of source data	O	O	O	O	O	O
3.3 Statistical techniques	LO	O	O	LO	O	O
3.4 Assessment and validation of intermediate data and statistical outputs	O	O	O	O	O	O
3.5 Revision studies	LO	O	O	LO	O	O
4. Serviceability						
4.1 Periodicity and timeliness	O	O	O	O	O	LO
4.2 Consistency	O	O	O	LO	LO	LO
4.3 Revision policy and practice	O	O	O	LO	O	O
5. Accessibility						
5.1 Data accessibility	LO	O	O	LO	O	O
5.2 Metadata accessibility	O	O	O	LO	O	O
5.3 Assistance to users	O	O	O	O	O	O

Practice observed: current practices generally in observance meet or achieve the objectives of DQAF internationally accepted statistical practices without any significant deficiencies.

Practice largely observed: some departures, but these are not seen as sufficient to raise doubts about the authorities' ability to observe the DQAF practices. **Practice largely not observed:** significant departures and the authorities will need to take significant action to achieve observance. **Practice not observed:** most DQAF practices are not met. **Not applicable:** used only exceptionally when statistical practices do not apply to a country's circumstances.

Table 2a. Turkey: Assessment of Data Quality—Turkish Statistical Institute (Turkstat)

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment. Turkstat is responsible for compiling the national accounts, the CPI, the PPI, and a range of other statistics. Its activities are supported by the Statistics Law (No. 5429) of November 2005. This law strengthened the coordinating role of Turkstat within the national statistical system, and created the Statistical Council chaired by the President of Turkstat and including the Undersecretary of the Treasury, the Governor of CBRT and other high-level officials, as well as private sector representatives. It meets at least once a year, helping to impart a sense of high priority and common effort towards the shared objective of statistical development. The credibility of the statistical framework is also supported by the five-year Strategic Plan and the Official Statistics Program (OSP). The latter specifies responsibilities across agencies, promotes discipline in dissemination, and emphasizes data quality. The 2005 law helped strengthen the basis for inter-agency coordination, facilitated access to administrative data, and reiterated the obligation to submit data for statistical purposes and the confidentiality of individual data (with sanctions for noncompliance). In this context, inter-institutional coordination for statistical production is broadly adequate, with the responsibilities for producing macroeconomic statistics clearly defined. Intra-Turkstat coordination is robust in the compilation of the national accounts, CPI, and PPI.</p> <p>Resources. A sustained effort to strengthen Turkstat has resulted in a substantial increase in material resources since 2001. As a result, its human and material resources are adequate and commensurate with tasks. Over 50 percent of staff are permanent and well-qualified. The ratio of personal computers to staff slightly exceeds unity.</p> <p>Relevance. User surveys are conducted periodically to ascertain views on the adequacy of the frequency, timeliness, and other aspects of quality. User input is also obtained through an ongoing web-based user survey, an annual research symposium, and an annual national statistics congress.</p> <p>Other quality management. Turkstat attaches great importance to quality in its work, and promotes quality awareness throughout the national statistical system. In this regard, the Quality Control Board examines and evaluates statistical work and oversees compliance with international standards. The quality of statistical projects is regularly assessed.</p>	<p>Professionalism. The internal operations of Turkstat reflect the actions of highly professional staff. Its professional independence is well cemented in the Statistics Law, which provides that the President of Turkstat reports directly to the Prime Minister, is appointed to a renewable five-year term by the Council of Ministers (with a two-term limit), and may not be removed from office (except for a disabling health condition). The culture of professionalism is widely recognized and the credibility of its output is high, particularly for the CPI. Personnel management fosters high professional standards. Recruitment and promotion are decided on credentials, ability, and performance. The 2005 law introduced clear guidance for recruitment, promotion, and performance appraisal. Statistical research is released in a number of publications and Turkstat monitors and adopts international methodological standards. Through press releases and seminars for the media, Turkstat seeks to build capacity to improve the understanding of its data. These practices were evident at the time of the release of revised GDP data in March 2008, when two press conferences were organized as well as presentations to the Prime Minister and the Council of Ministers. To track progress on data quality across the statistical system, Turkstat prepares annual monitoring reports on OSP implementation.</p> <p>Transparency. Recent passage of key legislation has created a robust basis for transparency in the work of Turkstat and the rest of the national statistical system. In particular, the 2005 Statistics Law provides an excellent basis for the promotion of transparency in statistical activity. Notably, it requires that all relevant information and methods used to compile official statistics be made public in order to allow evaluation of their quality (Article 4). In addition, the Information Access Law (No. 4982) of 2003 requires public officials to provide access to any information or document within 15 business days of a request. Through its website, Turkstat provides users with information on its legal framework, organization, output, and staff. Data are released simultaneously to the public, as well as policymakers. In advance of methodological changes, Turkstat informs selected users of impending changes, inviting feedback and hosting debate in certain cases. Publications clearly identify the units of Turkstat responsible for compilation.</p> <p>Ethical standards. Staff members are required by the Statistics Law (Article 13) to observe ethical standards and severe penalties may be imposed for transgressions (Articles 53 and 54).</p>

Table 2b. Turkey: Assessment of Data Quality—Ministry of Finance (MOF)

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment. Articles 30 and 53 of the Public Financial Management and Control Law (PFMCL) No. 5018, enacted in December 2003, authorize the MOF to compile and disseminate government finance statistics for the general government sector and to impose sanctions on institutions that do not provide timely and comprehensive data. Under this authority, the MOF is to establish compilation standards and practices, including coverage, accounting framework, and methods of recording and valuation. Also, the Official Statistical Program assigns to the MOF the responsibility of compiling budget statistics (revenue and expenditure), and financing and debt data to the Treasury. Article 23 of the Establishment Law No. 540 authorizes the SPO to collect data for compiling macroeconomic data (including on the operations of the public sector) needed for preparing Turkey’s Annual Programs. There is some scope to intensify interagency collaboration further to expedite an integrated approach to compilation coordinated by one agency and facilitate ongoing methodological development (including to accelerate use of a single chart of accounts and uniform economic and functional classifications by compilers at all levels of government and public entities).</p> <p>Resources. The number, qualifications, and training of staff are adequate to perform current tasks. The MOF’s introduction in 2006 of a standard chart of accounts for use by central and local government entities and social security institutions and the establishment of the say2000i government accounting system also for use by central government and local government entities have enhanced the efficiency of compilation. In addition, these actions have also contributed to the significant progress the MOF has made in improving the coverage and periodicity of its government finance statistics, and facilitated the MOF’s work to incorporate international standards—the <i>GFSM 2001</i> and <i>1995 ESA</i>—in its compilation of such data. Staff involved in compiling government finance statistics have improved their skills through training. However, action is needed to encourage a higher degree of retention of trained staff.</p> <p>Relevance. Various datasets are compiled and disseminated to meet specific needs of users, including for budgetary purposes and statistical reporting to the IMF. Email addresses and telephone numbers of contact persons are published with the data, and users’ feedback is monitored.</p> <p>Other quality management. Staff regularly attends international OECD and EUROSTAT meetings to keep abreast of developments in international standards. The authorities are aware that continued efforts are needed to further improve data quality, in particular, those on the local government and social security operations. While adequate for existing compilation activity, intensified consultation with the SPO could facilitate the MOF’s work to incorporate data on the local government and social security operations needed to compile the consolidated general government in line with the <i>GFSM 2001</i>. The MOF would need to take the initiative in this regard.</p>	<p>Professionalism. Professional qualifications and competence of compilers are high, with source data drawn from accounting records. Professionalism is recognized as essential to the credibility of the statistics.</p> <p>Transparency. Detailed data on revenue and expenditure as well as assets and liabilities are published on the MOF website. Only compilers and senior officials of compiling agencies have access to the data prior to release to the public. The public is informed of major changes in methodology at the time the changes are introduced.</p> <p>Ethical standards. Compilers are obligated to observe the Regulations on Public Ethical Principles issued by the Public Officials Ethical Commission. New staff are made aware of the Regulations and current staff are reminded periodically about the Regulations.</p>

Table 2c. Turkey: Assessment of Data Quality—Office of the Prime Minister: Undersecretariat of the Treasury (Treasury), and Office State Planning Organization (SPO)

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment. Article 23 of the Establishment Law No. 540 authorizes the SPO to collect data required for compiling macroeconomic statistics, including data on the operations of the public sector needed for the preparation of Turkey’s Annual Programs. Also, the SPO compiles government finance data for use in the preparation of the budget, and publishes annual data on the public sector finances. Under the Law on Regulating Public Finance and Debt Management (No:4749) and under Article 2/a of the Law on the Structures and Duties of the Undersecretariat of Treasury (No:4059), the Treasury is responsible for compiling financing data for the budgetary central government. The Treasury is the sole agency “producing, monitoring, and compiling” data on the central government debt and long-term external debt of the public sector (both issued domestically and externally). Its extensive experience in addressing compilation challenges to prepare comprehensive public finance data places the SPO in an excellent position to assist the MOF in its work to implement the <i>GFSM 2001</i>.</p> <p>Resources. The number, qualifications, and training of staff are adequate to perform the required tasks. The Treasury has a comprehensive database and an accountancy system to record in detail the central government’s domestic and foreign financial activities, as well as the external debt of the public sector. The system is supported by a robust IT back-up system. The central government accountancy database feeds into the MoF’s automated say2000i system on a timely basis. The SPO collects data on extrabudgetary funds, local governments, social security institutions, and state-owned enterprises.</p> <p>Relevance. Various datasets are compiled and disseminated to meet specific needs of users, including for EU accession reporting purposes. Email addresses and telephone numbers of contact persons are published with the data; and users’ feedback is monitored.</p> <p>Other quality management. Staff regularly attends international meetings of the OECD and the EUROSTAT to keep abreast of developments in international standards and methodologies.</p>	<p>Professionalism. Professional qualifications and competence of compilers are high, with source data drawn from accounting records. Professionalism is recognized as essential to the credibility of the statistics. To prevent misinterpretations or misuses of its data, the Treasury provides explanatory materials/briefings on a regular basis.</p> <p>Transparency. The Treasury publishes data on central government financing and debt on its website, both in English and in Turkish. Only relevant Treasury staff has access to the data prior to their release to the public. The data are kept confidential until announcements are made to the public. Responsible agencies are clearly identified along with the data published. Changes in methodology are rare and are noted on the Treasury’s website at the time of revisions. The SPO publishes data on public sector finances in Turkey’s Annual Programs, the Pre-Accession Economic Program, and the Medium-Term Program (all of which are authored by the SPO). Presentation of the data in publications includes explanations of key adjustments, facilitating understanding of the state of the consolidated public sector finances (including the general government and selected state-owned enterprises).</p> <p>Ethical standards. Compilers are obliged to obey the requirements of the Regulations on Public Ethical Principles issued by the Public Officials Ethical Commission. New staff is made aware of the Regulations and current staff is reminded periodically about the Regulations.</p>

Table 2d. Turkey: Assessment of Data Quality—Central Bank of the Republic of Turkey (CBRT)

0. Prerequisites of quality	1. Assurances of integrity
<p>Legal and institutional environment. The compilation and dissemination of monetary 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 2001. Article 43 of the CBRT Law authorizes the CBRT to directly request/collect all statistical information needed to exercise surveillance over financial and external developments from banks, other financial institutions, and persons (both legal persons and households). Article 43 protects the confidentiality of collected data. The OSP for 2007-2011 establishes that the CBRT is responsible for the compilation, processing, and dissemination of monetary and balance of payments, IIP, international reserves, private external debt, and short-term debt data. Working arrangements among agencies for the provision of statistical data to the CBRT are adequate. For instance, the CBRT uses surveys conducted by Turkstat to gather BOP data on shuttle trade and travel services. Also, total external debt are compiled/disseminated by the Treasury based on the CBRT data on long-term private external debt and short-term external debt.</p> <p>Resources. Human resources dedicated to compiling monetary and BOP statistics are adequate to perform existing tasks, but further expanding the set of supporting surveys and implementing upcoming methodological upgrades (<i>BPM6</i>) will require some supplementation in due course. Staff are well qualified and staff turnover is low. Data processing equipment are adequate. Efforts are devoted to continued improvement in data quality.</p> <p>Relevance. Users' data needs are monitored on an ongoing basis, based on monitoring of users' comments and questions. Reflecting the relevance of the BOP/IIP data, the number of users has doubled since 2001. The CBRT shows its commitment to improve the macroeconomic statistics by participating actively in international statistical workshops and seminars.</p> <p>Other quality management. The CBRT's authorities are aware that continued efforts are needed to maintain/improve the quality of their statistical production. The compilation and dissemination of high-frequency data on balance of payments (monthly), private external debt (monthly), and IIP (annual, included monthly IIP indicators) further demonstrate this commitment.</p>	<p>Professionalism. Monetary and BOP statistics are compiled on an impartial basis and the terms and conditions under which these statistics are produced promote professional independence. The CBRT enjoys autonomy in carrying out the duties and responsibilities defined in its law. The CBRT Law, which provides the basis for the compilation and dissemination of monetary and BOP statistics, is available on the CBRT website. The CBRT recruits and promotes staff based on aptitude and expertise. Staff demonstrates a high-level of dedication in the face of a heavy workload in responding to the extensive needs of multiple users, including the Monetary Policy Committee, the financial community, the public, and a host of international organizations (EU, IMF, BIS, OECD). A key factor underpinning good statistical performance is that staff are exclusively dedicated to compilation and dissemination responsibilities. Staff participate regularly in methodological courses, seminars, meetings, and conferences centered on monetary, BOP and other external sector statistics organized/sponsored by regional and international organizations</p> <p>Transparency. The laws and regulations under which monetary and BOP statistics are compiled/disseminated are posted on the websites of the CBRT and Turkstat (both in Turkish and English). There is no internal government access to monetary and BOP statistics prior to their release to the public. Monetary and BOP statistics are clearly identified as CBRT products in CBRT publications and the CBRT website, as well as in the OSP. Since 2002, the CBRT website includes a section with announcements about recent methodological changes for BOP statistics, and starting in mid-November 2008, also on future such changes. Recent and upcoming methodological and other changes, including for monetary statistics are at the CBRT website starting from mid-December 2008.</p> <p>Ethical standards. The CBRT Law and the CBRT Code of Conduct provide broad ethical guidelines for CBRT staff. 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.</p>

Table 3a. Turkey: Assessment of Data Quality—National Accounts

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. The national accounts estimates are prepared in accordance with the recommendations of the <i>1995 ESA</i>. Turkstat has published GDP series according to <i>1995 ESA</i> for the period 1998–2007, including a full scale revision of the corresponding quarterly GDP series.</p> <p>Scope. Turkstat compiles and disseminates the range of annual and quarterly national accounts tables recommended by the Intersecretariat Working Group on National Accounts (ISWGNA) except that: (i) the sequence of accounts for the total economy (up to the financial accounts) is not produced; and (ii) supply and use tables have been produced only for benchmark years. Plans are in place for producing supply and use tables annually for 2002 onwards. The economic territory, production and asset boundaries are generally in accordance with <i>1995 ESA</i>. However, illegal activities are not explicitly included in GDP.</p> <p>Classification/sectorization. Institutional units, transactions, and other flows are classified according to <i>1995 ESA</i>. The activity and product classifications are consistent with international standards.</p> <p>Basis for recording. Market prices are used for valuation of stocks and flows. Recording is generally done on an accrual basis.</p>	<p>Source data. Annual and quarterly surveys are based on a business register, developed and maintained by Turkstat. New quarterly surveys for service industries and construction are currently being developed. Lack of timeliness has been a major issue for the annual business survey and there are no quarterly collections from enterprises for capital formation or changes in inventories.</p> <p>Assessment of source data. Source data are regularly assessed and feedback provided to data suppliers.</p> <p>Statistical techniques are basically sound, with both production and expenditure estimates compiled at a sufficient level of detail. However, the change in inventories is derived as a balancing item. The base year for constant price estimates is 1998 and chain volume measures are compiled. Data from the annual business survey needs to be incorporated into the system as soon as feasible.</p> <p>Assessment and validation of intermediate data and statistical output. Estimates of household consumption expenditure for goods items, that are derived using a commodity flow approach, are significantly higher than the corresponding estimates from the annual household budget survey.</p> <p>Revision studies. Given limited utilization of independent annual data sources (and hence the limited scope for revisions to the quarterly series), no traditional revisions studies have been undertaken. However, comparisons between old and new estimates are made when historical revisions are undertaken.</p>	<p>Periodicity and timeliness. Periodicity and timeliness of the national accounts meet SDDS requirements.</p> <p>Consistency. Consistent annual time series are generally available from 1968, and quarterly time series from 1987. However, following the historical revision in March 2008, there is a break in all series at 1998. Consistency is maintained between the quarterly and annual national accounts series. In compiling the national accounts, Turkstat uses BOP data provided by the CBRT.</p> <p>Revision policy and practice. Revisions are generally limited to recent quarters, while in the second quarter release quarters of the previous year may be also be revised. A more appropriate revisions policy, allowing revisions to go back three or four years, is envisaged in future.</p>	<p>Data accessibility. Data are initially disseminated via a press release and on the Turkstat website. Time series are also published in various hardcopy publications. The release schedule for the national accounts is preannounced. No quarterly estimates are seasonally adjusted.</p> <p>Metadata accessibility. Metadata are available on the Turkstat website and on the IMF’s DSBB. A detailed sources and methods publication was released in 1994. An updated version is being produced in the form of the GNI Inventory.</p> <p>Assistance to users. Contact information is provided in the press release and on the website.</p>

Table 3b. Turkey: Assessment of Data Quality—Consumer Price Index

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions broadly follow international standards given in <i>1993 SNA</i> and the <i>Consumer Price Index Manual: Theory and Practice</i>.</p> <p>Scope. The index covers monetary expenditures relating to consumption of all resident households. The index weights exclude own-produced goods, including housing services for owner occupied dwellings.</p> <p>Classification/sectorization. Market basket items are classified according to a national classification system, which is a ten-digit extended version of the Classification of Individual Consumption by Purpose (COICOP).</p> <p>Basis for recording. The valuation rules used for recording flows and stocks are basically in accordance with the <i>1993 SNA</i>. Prices are market prices paid by households including all taxes levied on the products. However, deviating from international standards, sales of durable goods (such as vehicles) are not netted out from purchases for constructing market basket weights.</p>	<p>Source data. The items and weights are derived from a continuous Household Budget Survey (HBS). The HBS covers approximately 25,000 private households of all socio-economic groups. Weights are updated every year. About 360,000 prices are collected each month from 25,000 outlets in 26 regions and 81 cities.</p> <p>Assessment of source data. Prices collected are verified according to strict procedures established for checking price quotations. The weights emerging from the HBS are assessed against other source data (PPI, retail trade, imports, etc).</p> <p>Statistical techniques are in line with recommended practice. The weights, the outlet sample, and the list of products and specifications are reviewed and updated each year. The treatment of missing prices, disappearing goods, and quality adjustments is adequate. The index compilation formulas and aggregation procedures conform to international standards</p> <p>Assessment and validation of intermediate data and statistical outputs. Validation of CPI indices is carried out using the PPI as well as agricultural and import price data.</p> <p>Revision studies are carried out each year prior to updating the weights, the sample of outlets, the list of items, and the product specifications.</p>	<p>Periodicity and timeliness. The CPI is published on the third business day after the reference month.</p> <p>Consistency. Time series data are consistent and available without breaks. Index aggregation procedures are internally consistent.</p> <p>Revision policy and practice. Revisions to the CPI market basket are made each year based on the continuous HBS. The published CPI is not subject to revision, as it is final when released.</p>	<p>Data accessibility. The principal results of the CPI are disseminated every month on the Turkstat website and in the hardcopy “Press Release: Consumer Price Index Month/Year.” The CPI is simultaneously released to all users. The press release includes: (1) A brief analysis of the important changes in the index; (2) A chart comparing the 12-month percent changes for the current and previous year; (3) A series of tables presenting percent changes for one month, 12 months, current month to December of the previous year, and a 12 month moving average of percent changes. These tables cover the 12 major COICOP groups, the 26 regions, historical indices for four years and special indices such as core inflation indices. In addition complete historical data are available on the Turkstat website.</p> <p>Metadata accessibility. Metadata on the CPI are available on the Turkstat website.</p> <p>Assistance to users. A contact person along with contact information including a telephone number and e-mail address is available on the Turkstat website.</p>

Table 3c. Turkey: Assessment of Data Quality—Producer Price Index

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions broadly follow international standards given in <i>1993 SNA</i> and the <i>Producer Price Index Manual: Theory and Practice</i>, although the PPI is compiled only by product and not by economic activity.</p> <p>Scope. The PPI covers agriculture, fishing, mining, manufacturing and electricity, gas and water production. It does not cover exports and the service sector. The enterprises and commodities accounting for the largest value of domestic sales from production are chosen for the index.</p> <p>Classification/sectorization. Economic activities are classified using the Statistical Classification of Economic Activities in the European Community, Revision 1.1 (NACE Rev. 1.1). Products are classified using a 10-digit classification system associated with the EUROSTAT System for the Collection and Dissemination of Statistics on the Production of Manufactured Goods (PRODCOM). The national classification system includes three extra digits for more detail.</p> <p>Basis for recording. Prices are recorded net of excises, VAT, and other taxes on products.</p>	<p>Source data. The weights used for the index are based on industrial production data for 2005 and the agricultural and mining and energy censuses of 2005. Approximately 13,200 monthly price quotations are collected for 756 items from a survey of 1,725 firms. The coverage of the surveyed products represents approximately 70-80 percent of the nationwide share in total production.</p> <p>Assessment of source data. Prices collected are verified according to strict procedures established for checking price quotations. The weights emerging from the industrial and agricultural surveys are assessed against other source data (CPI, retail trade, imports, etc).</p> <p>Statistical techniques are in line with recommended practice. The weights, the sample of establishments, and the lists of products and specifications are reviewed and updated each year. The treatment of missing prices, the disappearance of products, and quality adjustments is adequate. Index compilation procedures are unbiased and in accordance with international recommendations.</p> <p>Assessment and validation of intermediate data and statistical outputs. Validation of PPI indices is carried out using the CPI as well as import and export price data.</p> <p>Revision studies are carried out each year prior to updating the weights, the sample of establishments, the list of items and the product specifications.</p>	<p>Periodicity and timeliness. The PPI is published on the third business day after the reference month.</p> <p>Consistency. Time series data are consistent and available without breaks. Index aggregation procedures are internally consistent.</p> <p>Revision policy and practice. The PPI weights are updated each year based on the industrial and agricultural surveys. The published PPI is not subject to revisions since it is final when released</p>	<p>Data accessibility. The main aggregates of the PPI are disseminated every month on the Turkstat website and in the hardcopy “Press Release: Producer Prices Index Month/Year.” The PPI is simultaneously released to all users. The press release includes: (1) A brief analysis of the important changes in the index; (2) A chart comparing the 12 month percent changes for the current and previous year; (3) A series of tables presenting percent changes for one month, 12 months, current month to December of the previous year, and a 12 month moving average of percent changes. These tables cover NACE categories at the two-digit division level and historical indices for four years. In addition complete historical data are available on the Turkstat website.</p> <p>Metadata accessibility. Metadata on the PPI are available on the Turkstat website.</p> <p>Assistance to users. A contact person along with contact information including a telephone number and e-mail address is available on the Turkstat website.</p>

Table 3d. Turkey: Assessment of Data Quality—Government Finance Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions of budgetary data are broadly consistent with those in the <i>Manual of Government Finance Statistics 1986 (GFSM 1986)</i>. However, the MOF has started to implement the guidelines in the <i>European System of Accounts 1995 (ESA 95)</i> and the <i>Government Finance Statistics Manual 2001 (GFSM 2001)</i>, including accrual recording of transactions.</p> <p>Scope. The SPO publishes data on the consolidated public sector finances on an annual basis. The MOF has begun work to produce and disseminate central government data consistent with the <i>GFSM 2001</i>. The MOF has yet to compile data on local government units and social security institutions to allow production of general government data. There is some room to expand the comprehensiveness of data on the total debt of local governments.</p> <p>Classification/sectorization. The 2005 Public Financial Management and Control Law has defined the general government sector and its subsectors. National classifications are bridged to those of the <i>GFSM 2001</i>. The MOF and other agencies are finalizing a national sectorization consistent with the <i>GFSM 2001</i>.</p> <p>Basis for recording. Generally, data are recorded on a mixed basis: revenue on a cash basis; and expenditure, on a commitment basis. All central government entities have adopted modified accrual accounting rules since 2006. Such accounting framework is being extended to the local governments and social security institutions.</p>	<p>Source data. Two major data sources are used: revenue and expenditure data compiled by the MOF and financing and debt data, by the Treasury; the automated <i>say 2000i</i> provides a centralized information system. In its newly constructed website, the SPO collects data on local government entities for use in its preparation of Turkey's Annual Programs and other policy-oriented publications.</p> <p>Assessment of source data. Some procedures are in place to assess source data; corrections are made when reporting errors are detected.</p> <p>Statistical techniques. The MOF has yet to deploy appropriate adjustments to newly available source data to derive general government statistics. Other techniques have improved in recent years; computerization has enhanced the feasibility of compiling higher frequency data.</p> <p>Assessment and validation of intermediate data and statistical outputs. Data are checked against accounting and budget data. The Court of Accounts audits aggregate data against accounting records of agencies at the end of each budget cycle. Budget realizations are subject to validation assessments undertaken by the SPO as part of its work in preparing the Annual Programs.</p> <p>Revision studies. Revisions are tracked to inform statistical practice, particularly for the compilation of the broadest fiscal aggregates (SPO). However, studies and analyses of revisions are not regularly conducted by all agencies.</p>	<p>Periodicity and timeliness prescribed by the SDDS are observed and exceeded in some areas.</p> <p>Consistency. Due to recent modifications of concepts and classifications, consistent time series are being developed. Regular consistency checks with other data sets are seldom conducted.</p> <p>Revision policy and practice. Major revisions are disseminated along with explanatory notes. However, a well-specified revision policy is lacking.</p>	<p>Data accessibility. Publication by the MOF of unconsolidated accounts of the central government and the local government operations has created the risk of misinterpretation of the data. This is because some inter-governmental transactions are not netted out, thus generating double-counting problems. Detailed data are accessible on the Turkish versions of the websites of the MOF and Treasury. The English and Turkish versions of the Treasury's website are comprehensive. However, the English language MOF website is less comprehensive than the Turkish version. Both Turkish and English versions of Turkey's Annual Programs, Pre-Accession Economic Program, and Medium-Term Program are accessible on the SPO website. Only summary data on extrabudgetary funds are published in the SPO documents. Data are released on a regular schedule to all users simultaneously, and in excel format for users' convenience. Advance release calendars are disseminated on Turkstat's <i>Economic Indicators</i>, and on the Treasury website. MOF intends to develop additional ARCs for higher frequency data.</p> <p>Metadata accessibility. Brief explanatory notes on definitions, methodology, sources, and contact information accompany the published data. Although additional information on methodologies and data sources is available upon request, published metadata have insufficient detail relative to user needs. Despite the wealth of data published, there is a lack of a roadmap to guide users on the nature of different datasets and to help them access the data that meet their needs, and to direct via hyperlinks.</p> <p>Assistance to users. Email addresses and telephone numbers of contact persons are disseminated along with the released data.</p>

Table 3e. Turkey: Assessment of Data Quality—Balance of Payments

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions broadly follow <i>BPM5</i>, including for resident units (such as enterprises operating in free trade zones and offshore entities) and direct investment. Foreign currency deposits held with the CBRT by Turkish citizens residing abroad are adequately recorded in Turkey's template on international reserves and foreign currency liquidity.</p> <p>Scope is broadly consistent with <i>BPM5</i>. Transactions between residents and nonresidents are broadly covered, including shuttle trade, reinvestment earnings, debt securities issued abroad held by residents, and domestic securities held by nonresidents. Tracking of certain transactions on external deposits of the nonbank private sector and noncash loan disbursements to the public sector could be strengthened.</p> <p>Classification/sectorization has been broadly in line with <i>BPM5</i> guidelines since 2002, but there is some room for further improvement. Equity assets are not separately identified from debt security assets, and financial derivatives are commingled with portfolio investment.</p> <p>Basis for recording. Most data are valued at market prices and converted into U.S. dollars using the recommended procedures. Some transactions are recorded on cash basis (rather than on accrual basis).</p>	<p>Source data are broadly adequate to compile BOP data. Since 2001, several new (or improved) surveys have supplemented banks' foreign exchange records. Key sources include (i) trade data compiled by Turkstat; (ii) banks' foreign exchange records; (iii) surveys conducted by Turkstat (shuttle and travel) and CBRT (inward FDI, portfolio investment assets, and various services); and (iv) administrative data.</p> <p>Assessment of source data is routine, including banks' foreign exchange records and surveys. Survey response rates are very high.</p> <p>Statistical techniques. Adequate procedures are used to minimize errors and to adjust data for missing information. Also, sound procedures are used to improve coverage and classification of source data, including adjustments to trade data, and estimations of some services, income, and trade credits.</p> <p>Assessment and validation of intermediate data and statistical outputs Statistical discrepancies are assessed and data validated. Errors and omissions are monitored (around ½ percent of GDP for 2002-2007). Comparisons with trading partner trade data (DOTS) and creditors' data (JEDH), as well as regular detailed BOP/IIP reconciliation (in tabular form) could further strengthen validation procedures.</p> <p>Revision studies. Data revisions are carried out routinely and the results are considered in compiling data for subsequent periods.</p>	<p>Periodicity and timeliness of BOP statistics exceed the SDDS prescriptions (monthly data are published with six weeks timeliness). In addition, the CBRT disseminates annual IIP data with six months timelines and, since April 2008, IIP monthly indicators with seven weeks timeliness.</p> <p>Consistency. BOP data are broadly consistent internally and over time. For the most part, data are consistent or reconcilable with other datasets, including merchandise trade, IIP, external debt, and MFS. There are limited regular reconciliation exercises with GFS and national accounts.</p> <p>Revision policy and practice. Monthly data are provisional when first released and data are revised monthly subject to data availability. When major revisions to the BOP are made, the revision is announced on the CBRT website. Starting in mid-November 2008, the CBRT publicizes its revision policy.</p>	<p>Data accessibility. BOP data are disseminated in accordance to <i>BPM5</i> standard components with annual data series since 1987 and monthly data since 1992. Comprehensive and detailed data are disseminated, with charts and tables to facilitate analysis. Data are made available to all users at the same time on the CBRT website and released on a preannounced schedule.</p> <p>Metadata accessibility. Comprehensive and updated documentation on the conceptual framework, sources, and methods for BOP compilation (including examples) is available at the CBRT website. Metadata are also included in BOP publications and at Fund's DSBB. Metadata are included in IIP publications and posted in the IMF website, but no comprehensive document on IIP metadata is produced.</p> <p>Assistance to users is adequate. Contact points for BOP/IIP data are in CBRT website and the Fund's DSBB. Prompt assistance is provided to users, in line with the 2003 Information Access Law.</p>

Table 3f. Turkey: Assessment of Data Quality—Monetary Statistics

2. Methodological soundness	3. Accuracy and reliability	4. Serviceability	5. Accessibility
<p>Concepts and definitions. Monetary statistics are broadly consistent with the <i>Monetary and Financial Statistics Manual (MFSM)</i> albeit some different terminologies are used. The CBRT disseminates the monetary survey, which is similar to the depository corporations survey as defined in the <i>MFSM</i>.</p> <p>Scope. The scope of the monetary statistics is consistent with the <i>MFSM</i>. This is because the monetary statistics cover the CBRT and the other depository corporations (ODCs)—commercial banks, participation banks, investment and development banks, and money market funds (MMFs) issuing “Type B” liquid funds.</p> <p>Classification/sectorization. The principles used are largely in line with the <i>MFSM</i>. Although each published individual table does not cover all details as presented in the <i>MFSM</i> formats, all published tables combined provide most details. However, financial derivatives as well as positions vis-à-vis MMFs are not separately identified.</p> <p>Basis for recording. Valuation of assets is broadly consistent with the <i>MFSM</i> except that monetary gold is valued only on a quarterly basis and accrued interest is not included in the value of the underlying instruments.</p>	<p>Source data. Data for both the CBRT and banks are obtained electronically via a comprehensive system. Owing to extensive and rigorous reporting requirements, data for banks are often available only after 23 business days. Also, MMFs’ liabilities are assumed to be to households as a sectoral breakdown is not available.</p> <p>Assessment of source data. The reporting forms are occasionally revised to reflect changes in the accounting records and the compilers’ need. The data processing and production is fully computerized. Problems with source data are resolved directly with reporting banks.</p> <p>Statistical techniques. Monetary statistics are derived electronically, thus minimizing errors. If data for some banks are not available on time, the previous month’s data are used. Generally, source data are not adjusted.</p> <p>Assessment and validation of intermediate data and statistical outputs The quality of source data is controlled through a computerized cross-check program. The data accuracy is also checked against secondary data sources, such as data for supervisory purposes and data compiled by other CBRT departments.</p> <p>Revision studies. Revision studies are conducted occasionally and taken into account by staff in their work. Revised data are archived.</p>	<p>Periodicity and timeliness Turkey meet the SDDS requirements on periodicity, but take a flexibility option on the timeliness of the banking sector data, which are published with a lag of over two months. Data are disseminated according to an advance release calendar.</p> <p>Consistency. Consistent time series are available for a long period. Changes to data series are explained in the footnotes of the statistical tables. However, consistency checks with government finance statistics are rarely conducted. There are some inconsistencies between published fiscal data and monetary data on government accounts. Data on transactions between the CBRT and ODCs are not fully consistent.</p> <p>Revision policy and practice Any revision is taken into account in compiling data for the subsequent periods. Starting in mid–December 2008 revision practices are made public.</p>	<p>Data accessibility. The monthly monetary statistics are disseminated in the CBRT’s website and the <i>Quarterly Bulletin</i>, available in Turkish and English. Weekly data are disseminated in “Weekly Press Bulletin,” which is also available in website. Publication contains tables of major categories of assets and liabilities with further breakdown by detailed components. Users can download data series from the website as far back as January 1986. Data are disseminated to all users at the same time based on the advance release calendar, which is posted on the CBRT’s website.</p> <p>Metadata accessibility. SDDS metadata and summary methodologies on the DSBB are updated on a regular basis. Footnotes explaining the changes to data are provided under each statistical table. Information on the methodology used to compile monetary statistics was made available at the CBRT’s website starting in mid–December 2008.</p> <p>Assistance to users. Data users can reach a contact person using the address and e-mail provided on the CBRT’s website, and by direct contact with the CBRT. A subscription form is available on the website.</p>

III. STAFF'S RECOMMENDATIONS

15. Staff's recommendations are aimed at redressing shortcomings identified in the assessments, which are based on the review of statistical practices, discussions with the data producing agencies, and input from users. Recommendations propose ways to further increase observance of international standards. Their implementation would help enhance the usefulness of the published macroeconomic statistics. Some additional technical suggestions are included in the companion Detailed Assessments volume.

Cross-cutting Recommendations

- Conduct regular inter-agency consultation to verify consistency among the macroeconomic datasets. For example, this should include regular meetings to reconcile fiscal data with monetary data (also verifying consistency of coverage) as well as with national accounts estimates of public consumption and investment.
- Give greater priority to the periodic conduct of revision studies to better inform compilation and users.

National Accounts

High priority

- Integrate a regular annual estimation process into the existing—mainly quarterly based—extrapolation system for compiling the national accounts. To this end, construct annual supply and use tables in current and constant prices using data from the annual structural business survey and other available sources.
- Compile a more independent measure of household final consumption expenditure, both annually and quarterly, using data from the annual business survey for retail and service industries, the new quarterly service industry collection, and other sources.
- Collect information on changes in inventories (at least for the major stock holding industries—mining, manufacturing and wholesale and retail trade) on a quarterly basis.
- Produce results from the annual structural business survey on a more timely basis.
- Compile and publish the sequence of accounts for the total economy on an annual—and preferably quarterly—basis.
- Seasonally adjust all published quarterly national accounts estimates.

Other

- Reconstruct the GDP series on the new *1995 ESA* basis as far back as possible.
- Publish a series for gross national income in the next quarterly national accounts release (necessary data are available from the BOP), ensuring that migrant transfers are not taken into account.

- Publish estimates for the income components of GDP and compensation of employees by industry as part of the quarterly national accounts release.
- Publish more components of gross fixed capital formation (such as software, mineral exploration expenditure) in the quarterly national accounts.
- Calculate explicit adjustments for the non-observed economy on an annual basis, rather than extrapolating the 2002 benchmark estimates.
- Develop a methodology for adjusting value-added for the understatement of income and overstatement of expenses in data collected from businesses.

Consumer and Production Price Indices

High priority

- Estimate CPI market basket weights for durable goods using households' net purchases.
- Expand CPI coverage to include housing costs for owner-occupants, possibly by compiling a separate index similar to those used to measure core inflation.
- Expedite planned expansion of PPI coverage by compiling export indices.

Other

- Include compilation of PPI by economic activity in medium-term plans.
- Move forward with plan to further expand PPI coverage to include the service sector, possibly on a flow basis, beginning with public transportation and communication.

Government Finance Statistics

High priority

- Disseminate (MOF, Treasury, and SPO) a clear roadmap on the nature and inter-relationships of the various published fiscal datasets to guide users match data with their needs, while directing them to the appropriate website location via hyperlinks.
- Compile and disseminate (MOF) consolidated accounts of the general government, specifying the consolidated accounts of components. This will require expediting efforts to use available source data (on accrual basis) to produce timely estimates of the finances of the local governments and the social security entities.
- Further intensify collaboration (MOF, Treasury, and SPO) to expedite an integrated approach to compiling fiscal data coordinated by one agency as well as to accelerate ongoing implementation of a single chart of accounts and the same economic and functional classifications by all levels of government and public entities.

Other

- Disseminate (Treasury) additional data on public debt, based on the residency criterion.
- Collaborate (all agencies) for publication of comprehensive statistics on the total debt of local governments.
- Publish (SPO) a study of experience in preparing fiscal data in order to inform the public on statistical processes for compiling consolidated public sector data covering the budgetary central government, extrabudgetary funds, social security institutions, local governments, and state-owned enterprises.

Balance of Payments***High priority***

- Improve the coverage of noncash disbursements for government loans and nonbank external deposit assets; the recording of bonds issued abroad held by residents, financial derivatives, and equity/debt security assets; and further develop/improve surveys on FDI (quarterly) and services.
- Extend market valuation to all tradable debt instruments, and record on an accrual basis investment income in the BOP and external debt in the IIP.
- Compile regularly a detailed BOP/IIP reconciliation table and publish a summary reconciliation table in 2009.
- Allocate more staff resources to compilation of BOP and IIP for further expanding the set of supporting surveys and implementing the upcoming *BPM6* in due course.

Other

- Disseminate quarterly IIP data (as encouraged by SDDS) and comprehensive IIP metadata.
- Assess regularly the consistency of BOP/IIP statistics, including with data from trading partners (DOTS) and creditors' data (JEDH).

Monetary Statistics***High priority***

- Bring the timeliness of the monetary survey and the analytical accounts of the banking sector in line with the SDDS prescription. To this end, move expeditiously, in collaboration with the BRSA, to streamline the reporting system without loss of necessary detail.

- Identify and report separately financial derivatives in the “sectoral accounts.”
- Address discrepancies in inter-bank data.

Other

- Identify separately the MMFs that issue “Type B Liquid Funds” in the “Institutional Sector List” to facilitate appropriate classification by reporters.
- Adhere more closely to the terminology in the *MFSM*, particularly to describe financial instruments, and explain in footnotes any deviations, when warranted.

Appendix I. Coverage, Periodicity, and Timeliness—Practices Compared with the SDDS

SDDS Data Category	Coverage (meets SDDS)	Periodicity		Timeliness	
		SDDS	Turkey	SDDS	Turkey
DATA CATEGORIES AND INDICATORS					
Real Sector					
National accounts	Yes	Q	Q	1 Q	NLT 3 M
Production index	Yes	M	M	6 W (<i>1 M</i>)	NLT 6 W
<i>Forward-looking indicators</i>	...	<i>M or Q</i>	<i>M</i>	<i>1 M or 1 Q</i>	<i>NLT 2 W</i>
Employment	Yes	Q	M	1 Q	NLT 80 D
Unemployment	Yes	Q	M	1 Q	NLT 80 D
Wages/earnings	Yes	Q	Q	1 Q	NLT 3 M
Price index: Consumer prices	Yes	M	M	1 M	3 D
Price index: Producer prices	Yes	M	M	1 M	3 D
Fiscal Sector					
General government or public sector operations	Yes	A	A	2 Q	6 M
Central government operations	Yes	M	M	1 M	1 M
Central government debt	Yes	Q	M	1 Q	NLT 3 W
Financial Sector					
Analytical accounts of the banking sector ^{2/}	Yes	M	M	1 M	NLT 2 M ^{2/}
Analytical accounts of the central bank	Yes	M (<i>W</i>)	W	2 W (<i>1 W</i>)	1 W
Interest rates	Yes	D	D	^{1/}	D
Stock market: Share price index	Yes	D	D	^{1/}	D
External Sector					
Balance of payments	Yes	Q	M	1 Q	6 W
Official reserve assets	Yes	M (<i>W</i>)	W	1 W	6 D
Reserves template	Yes	M	M	1 M (<i>1 W</i>)	1 M
Merchandise trade (exports: f.o.b.; imports: f.o.b.)	Yes	M	M	8 W (<i>4-6 W</i>)	1 M
International investment position	Yes	A (<i>Q</i>)	A	3 Q (<i>1 Q</i>)	2 Q
External debt	Yes	Q	Q	1 Q	1 Q
Exchange rates	Yes	D	D	^{1/}	D
Socio-demographic data					
Population	Yes	A	A	...	NLT 3 M
D = Daily; W = Week(ly); M = Month(ly); Q = Quarter(ly); A = Annually; NLT = Not later than; (...) = not applicable					

Italics indicate recommended or encouraged categories.

^{1/} Given that the data are broadly disseminated by private means, the timeliness with which official data are disseminated is not critical.

^{2/} Turkey is availing itself of a flexibility option on the timeliness of the Analytical accounts of the banking sector data. Under this flexibility option the timeliness is NLT two months after the reference period. Due to year-end delays, data for February are disseminated NLT three months and data for December and January NLT four months after the reference period.

INTERNATIONAL MONETARY FUND

TURKEY

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

Response by the Authorities

September 3, 2009

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

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RESPONSE OF THE AUTHORITIES

The Authorities commend the meticulous work done for the preparation of this update of the 2001 Data ROSC. The Authorities also welcome the recommendations based on the ROSC framework and mission findings. The ongoing work of the Authorities regarding the recommendations and assessments provided in the Report are presented below.

I. NATIONAL ACCOUNTS

- The National Accounts Group has consisted of 7 teams and 53 staff in total including two new teams which were established in February 2009. (Production Approach-10 staff-, Expenditure Approach-5 staff-, Income Approach-4 staff-, Annual Accounts (SUT)- 9 staff-, and Institutional Sector Accounts -15 staff-, Regional Accounts-5 staff- and Methodology Team-5 staff-).
- A major revision of the national accounts by recommendation of the 1995 ESA was released in March 2008. This revision covers the annual and quarterly estimates by the production and expenditure approach. The revised series for GDP by income approach will be published in 2009.
- Household final consumption expenditure, external trade and investment in machinery and equipment are compiled according to the Classification of Individual Consumption by Purpose (COICOP). The work on the improvement of household final consumption expenditure needs to be continued under the project on the improvement of expenditure accounts and the improvements of quarterly national accounts.
- The Seasonal Adjustments Working Group has been established to study seasonal adjustment. This group had training courses on methodological and practical application of seasonal adjustment.
- A draft GNI (Gross National Income) inventory (chapters 1, 3, 7 and 9) which covers explanations of source data, methodology or statistical techniques has been completed.
- Businesses (especially small businesses) tend to understate their turnover and gross output and to overstate their intermediate expenditure. The impact on value added can be very significant. To calculate the impact of the misreporting of income and expenses some investigation was done. A draft misreporting questionnaire has been designed and advice from suitable professional accountants is sought. The misreporting will be calculated with the results of these studies.
- Regional GDP (Gross Domestic Product) data will be estimated at NUTS 2 level in current values by mixed methods.

- Studies on institutional sector accounts are carried out under the project on annual institutional sector accounts. A working group in the framework of the compilation of government sector accounts was established by TurkStat in cooperation with the Central Bank, Ministry of Finance and Undersecretariat of Treasury. The main goal of this group is to prepare tables related to the general government accounts and EDP Notification Tables. There is a close cooperation among the institutions involved and the responsibilities of each of them are defined under the Statistical Official Programme 2007-2011.
- The first results of the new quarterly survey of service industries were published in December 2008 including four years data.
- Studies on GNI estimation are carried out by recommendations of 1995 ESA.

II. PRICE STATISTICS —CONSUMER PRICE INDEX

The Authorities acknowledge that the ROSC report reflects the current situation. It was useful for the Authorities to discuss current CPI and PPI methods including new techniques and problematic areas with the experts.

- A new chained CPI was calculated in 2009. In the weighting structure of this index, net sales of durable goods are used. Moreover, a component for the price of fire insurance was added to the index in order to make the compilation of the HICP more convenient. Every year, additional quality control systems and improved techniques are developed. Moreover, the new CPI covers owner-occupied housing, commodities produced by households for own consumption and expenditures on commodities obtained through in-kind payments.
- The results of 2005-2006-2007 HBS are used in calculations for the 2009 CPI. The new market basket has 449 items and 845 sub-items. The previous CPI had 454 items and 851 sub-items.

III. PRICE STATISTICS —PRODUCER PRICE INDEX

- In accordance with the official statistics program of Turkey, the updated PPI will include components for export and services. The ROSC report reflects a good summary of the PPI methodology currently in use for compilation based on product aggregations for domestic sales. Development of a PPI compiled by economic activity or industry is not foreseen in the near future.

IV. GOVERNMENT FINANCE STATISTICS

The Authorities consider that the assessments of the ROSC add value to their ongoing work on the Government Finance Statistics (GFS) including for improving the scope of general government and completing adjustments on the use of source data for local governments and social security institutions. The recent developments on these fronts are stated below:

- To fully align classification of the general government sector with GFSM 2001 and to eliminate the differences in the data coverage for the purposes of government finance statistics a “Communiqué on General Public Sector Statistics” was published in the Official Gazette on February 04, 2009.
- Expenditure and revenue data of the social security institutions during 2006-2008 on a cash basis were received and the preparation of the general government sector tables that are required by EUROSTAT has commenced.
- The Treasury is responsible for the compilation, monitoring and dissemination of the long term public external debt statistics, including the local government external debt. Regarding the domestic debt, the responsibility of the Treasury is limited for the central government domestic debt statistics. For the general government sector and thus the local government sub sector, the Ministry of Finance is responsible for the compilation and dissemination of the financial accounts including the debt accounts, according to the public financial management and control law.

V. BALANCE OF PAYMENTS

Based on the ROSC framework and IMF staff recommendations, contact information, revision policy, announcements about methodological changes, and announcements about future changes were added to the CBRT’s website for the balance of payments (BOP) and the International Investment Position (IIP) statistics during the time of the IMF mission in November 2008.

As it has been indicated by the Authorities of the CBRT during the ROSC mission, data on ‘Embassies and Consulates’ included in the Current Account / Services / Government Services item which are obtained from the banks’ records have been replaced by the results of the studies carried out by using the administrative records in the BOP Statistics for October 2008. Accordingly, the study results have been revised for 2007 and January-September 2008 on December 19, 2008.

On-going and forthcoming studies of the Authorities related to the IMF’s staff recommendations divided into “*High Priority*” and “*Other*” are explained below.

High Priority

- **Improve the coverage of noncash disbursements for government loans and nonbank external deposit assets; the recording of bonds issued abroad held by residents, financial derivatives, and equity/debt security assets; and further develop/improve surveys on FDI (quarterly) and services.**

In order to improve the recording of bonds issued abroad held by residents, financial derivatives, and equity/debt security assets ongoing studies conducted by working groups have been accelerated. Regarding the coverage of noncash disbursements for

government loans, authorities from the Undersecretariat of Treasury and the CBRT started to work on the issue. Stock figures for nonbank external deposit assets are obtained from BIS and used in IIP with a time lag. On the other hand, the use of flow figures from the same source or from other sources is under consideration. As an improvement on services, “Embassies and Consulates” data obtained from administrative records have been recently included in the “Government Services” item. Also, a survey was conducted for construction services item for 2007 figures and questionnaires for 2008 will be sent to respondents shortly. After the responses are evaluated, results will be used in BOP statistics accordingly. Conducting a quarterly inward FDI survey for IIP needs allocation of more staff resources.

- **Extend market valuation to all tradable debt instruments, and record on an accrual basis investment income in the BOP and external debt in the IIP.**

Detailed work and close cooperation with the Treasury are needed for recording on an accrual basis investment income. In this context, a working plan will be formed by the Authorities and this issue will be kept under consideration in the near future.

- **Compile regularly a detailed BOP/IIP reconciliation table and publish a summary reconciliation table in 2009.**

Currently, the detailed BOP/IIP reconciliation table is prepared but not on a regular basis and for internal use only. It has been decided to work on monthly reconciliation tables also for internal use. Consequently, based on the results of these studies, it is planned to disseminate a summary reconciliation table on an annual basis.

- **Allocate more staff resources to compilation of BOP and IIP for further expanding the set of supporting surveys and implementing the upcoming BPM6 in due course.**

We totally agree with this recommendation. The ongoing studies can be accomplished properly by allocating more staff resources.

Other

- **Disseminate quarterly IIP data (as encouraged by SDDS) and comprehensive IIP metadata.**
- Dissemination of quarterly IIP data mostly depends on conducting a quarterly inward FDI survey. This project is constrained by lack of enough staff resources. Comprehensive IIP metadata are prepared and will be posted in the CBRT’s internet website in coming months.
- **Assess regularly the consistency of BOP/IIP statistics, including with data from trading partners (DOTS) and creditors’ data (JEDH).**

- After the ROSC mission, it has been decided that review studies on international data sources such as trading partners (DOTS) and creditors' data (JEDH) will be conducted once a year based on year-end figures.

VI. MONETARY STATISTICS

Inspired by the findings of ROSC study, contact information corresponding to each data series at the Electronic Data Dissemination System on the CBRT website has been added and a separate section for Money and Banking Statistics including information on methodology, revision policy, announcements on methodological changes and revisions was prepared in mid-December 2008 in order to improve our dissemination policy for better transparency purposes.

Ongoing and forthcoming studies of the Authorities related to the IMF's staff recommendations divided into "*High Priority*" and "*Other*" are explained below.

High Priority

- Bring the timeliness of the monetary survey and the analytical accounts of the banking sector in line with the SDDS prescription. To this end, move expeditiously, in collaboration with the BRSA, to streamline the reporting system without loss of necessary detail.

CBRT:

The extensive branch banking system in Turkey does not allow banks to complete the whole Reporting Package in less than 23 business days. Besides, the Reporting Package which is also used for supervisory purposes by the BRSA contains a large number of forms closely linked with each other, entailing to report as a block. However, CBRT is planning to cooperate with the BRSA on possible solutions to improve timeliness.

BRSA:

Under Banks' Supervisory Package, the banks report plenty of forms within 23 business days to BRSA and CBRT. All these forms are obtained in a timely manner via strong electronic control systems that assure all forms are reported without delay and checking for errors by using internal and cross controls. To ensure accuracy of the data, BRSA also implements the penalty system for the delays on the submission of the forms and the lack of/or erroneous data in the forms. Due to these precautions, banks complete reporting forms with almost no errors within this 23-day period. Especially, the trial balance form is the base form which is closely related to the other forms in the package. Therefore, the trial balance form should be reported simultaneously with other forms to BRSA and, all information in these forms should be in compliance with each other. When considering the banks' reporting

infrastructure or potential in the short period, it seems difficult to shorten the reporting lag.

- **Identify and report separately financial derivatives in the “sectoral accounts.”**

The study on inclusion of financial derivatives in MFS is initiated without delay. A working group is analyzing how to classify related entries in Banks’ Uniform Chart of Accounts into MFS. It is planned that financial derivatives will be identified and reported separately in the sectoral accounts in 2009.

- **Address discrepancies in inter-bank data.**

Studies will continue for inquiring and diminishing the discrepancies in interbank data which arise from time difference and some misclassifications in banks’ report.

Other

- **Identify separately the MMFs that issue “Type B Liquid Funds” in the “Institutional Sector List” to facilitate appropriate classification by reporters.**

We totally agree with the recommendation. MMFs that issue “Type B Liquid Funds” will be separately identified in the “Institutional Sector List” in 2009.

- **Adhere more closely to the terminology in the MFSM, particularly to describe financial instruments, and explain in footnotes any deviations, when warranted.**

A study to improve sectoral and financial instrument breakdown in the disseminated data in a format and terminology closer to the MFSM will also be initiated in 2009.

INTERNATIONAL MONETARY FUND

TURKEY

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

Volume III

Detailed Assessments Using the Data Quality Assessment Framework (DQAF)

Prepared by the Statistics Department

Approved by Adelheid Bürgi-Schmelz and Marek Belka

September 3, 2009

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

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ACRONYMS

<i>1995 ESA</i>	<i>European System of Accounts 1995</i>
<i>1968 SNA</i>	<i>System of National Accounts 1968</i>
<i>1993 SNA</i>	<i>System of National Accounts 1993</i>
ARC	Advance Release Calendar
BEC	Classification of Broad Economic Categories, United Nations, 1989
BIS	Bank for International Settlements
BOP	Balance of Payments
<i>BPM5</i>	<i>Balance of Payments Manual, fifth edition</i>
<i>BPM6</i>	<i>Balance of Payments and International Investment Statistics Manual, Sixth edition</i>
BRSA	Banking Regulation and Supervision Agency
CBRT	Central Bank of the Republic of Turkey
CDIS	Coordinated Direct Investment Survey
CPI	Consumer price index
CPIS	Coordinated Portfolio Investment Survey
CRA	Central Registry Agency
DCs	Depository Corporations
DMBs	Deposit Money Banks
DOTS	IMF's Direction of Trade Statistics
DQAF	Data Quality Assessment Framework
DSBB	Dissemination Standards Bulletin Board of the IMF
ECB	European Central Bank
EDDS	CBRT's Electronic Data Delivery System
EDTS	Electronic Data Transfer System
Eurostat	Statistical Office of the European Communities
EU	European Union
FDI	Foreign direct investment
GDDI	Government Domestic Debt Instruments
GDP	Gross domestic product
GFS	Government finance statistics
<i>GFSM 1986</i>	<i>A Manual of Government Finance Statistics, 1986</i>
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i>
HICES	Household Income and Consumption Expenditure Survey
HBS	Household Budget Survey
HRD	Human Resources Department of the CBRT
IDBs	Investment and Development Banks
IFRS	International Financial Reporting System
IIP	International investment position
ILO	International Labor Organization
IMF	International Monetary Fund
ISE	Istanbul Stock Exchange
ISL	Institutional Sector List
<i>ISIC</i>	<i>International Standard Industrial Classification of all Economic Activities</i>
ITRS	International Transactions Reporting System

JEDH	Joint External Debt Hub
MFDD	Monetary and Financial Data Division of the CBRT
MMFs	Money Market Funds
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
MOF	Ministry of Finance
NACE	Statistical Classification of Economic Activities in the European Communities
NSDB	National Summary Data Page
ODCs	Other depository corporations
OECD	Organization for Economic Cooperation and Development
OSP	Official Statistics Program
Reserve template	Template on international reserves and foreign currency liquidity
PBs	Participation Banks
PNFCs	Public Nonfinancial Corporations
PPI	Producer price index
RFAs	Revolving fund administrations
ROSC	Report on the Observance of Standards and Codes
SBS	Sectoral Balance Sheet
SD	Statistics Department of the CBRT
SDDS	Special Data Dissemination Standard
SIS	State Institute of Statistics
<i>SITC</i>	<i>Standard International Trade Classification</i>
SNA	System of National Accounts
SPO	State Planning Organization
SRFs	Standardized Report Forms for MFS
Treasury	Undersecretariat of the Treasury
Turkstat	Turkish Statistical Institute
UCA	Uniform Chart of Accounts for Banks
UN	United Nations
VAT	Value-added tax

DETAILED ASSESSMENT USING THE DATA QUALITY ASSESSMENT FRAMEWORK (DQAF)

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

I. NATIONAL ACCOUNTS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The 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. That Law was supplemented by Decrees No's 219, 357 and 403 in 1984, 1989, and 1990, respectively. A revised statistical law was prepared, with a view to making Turkey's statistical provisions fully consistent with Eurostat guidelines in support of Turkey's candidacy for European Union (EU) membership. The new law, the Statistics Law of Turkey No. 5429, was enacted on November 10, 2005. This new law totally replaces all previous legislation relating to the production of statistics in Turkey.

The new law establishes the basic principles and standards concerning the production and organization of official statistics. It provides for the creation of the Turkish Statistical Institute (Turkstat) and specifies its duties and authorities which are to collect, assess and disseminate all kinds of statistics relating to the economic, social, and cultural activities of the country, and to ensure coordination among other institutions and organizations that are involved in the statistical process prescribed in the Official Statistics Program (Article 1).

The Official Statistics Program (OSP) establishes the framework for official statistics that should be produced on subjects required at both national and international levels. Censuses and surveys are carried out within the framework of this Program. Taking into account existing resources, respondent burden, and cost-benefit analyses, the Program specifies the statistics needed to determine and monitor the situation of the country in the fields of the economy, social issues, demography, culture, environment, science, technology and any other required areas. The OSP is a detailed rolling five year plan prepared by Turkstat with the benefit of advice from the Statistical Council (a high level advisory body that is technically part of Turkstat). The OSP needs to be approved by the Council of Ministers and its implementation is the responsibility of Turkstat. Turkstat produces an annual report on the implementation of the program (Article 3).

The technical independence of Turkstat is clearly enunciated in Article 17 of the Statistics Law of Turkey. No person or organization outside Turkstat can give instructions to the staff of Turkstat in relation to data sources, selection of statistical methods and procedures; form, content and time of dissemination; and observance of statistical confidentiality.

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

Turkstat has a central role in coordinating the whole statistical system in Turkey. The duties and authorities of Turkstat are proscribed in Article 18 of the Statistics Law of Turkey. Turkstat is responsible for preparing the Official Statistics Program and for monitoring its implementation. Turkstat is responsible for determining the statistical methods, definitions, classifications and standards to be used in the production of official statistics (both within Turkstat and other institutions) in line with national and international norms. Each year Turkstat issues an advance release calendar for all official statistics.

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

Article 13 of the Statistics Law of Turkey states that individual reporters' data should not be provided to any administrative, judiciary or military authority, or person. Under Article 53 of the Statistics Law of Turkey staff who violate these provisions are liable to imprisonment and a (nominal) fine according to Article 258 of the Turkish Penal Code no. 5237.

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.

Article 14 of the Statistics Law of Turkey allows unit record data to be provided for research purposes provided that any information that could be used to identify individual respondents has been removed from the data file.

Steps are taken to secure the premises of the data-producing agency, and computer systems are password protected to prevent unauthorized access to data, which is limited according to need.

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

According to Articles 7 and 9 of the Statistics Law of Turkey, Turkstat 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 Turkstat. Turkstat is authorized to investigate the accuracy of the information furnished, and to request additional information and documents from those concerned. The

Law also proscribes that noncompliance can result in an administrative fine (Article 54). 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, fined.

To assist respondents to the annual business surveys to correctly complete their questionnaires, commonly used commercial accounting codes for relevant items have been included for each data item in the survey questionnaire. This practice was introduced for the survey in respect of reference year 2005 and continued in subsequent surveys.

0.2 Resources

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

Management considers that staff resources at present are commensurate with operational needs. Staff turnover is not a problem for the NAG with many staff having more than 15 years experience in national accounts.

Computer resources are adequate as all staff have their own PCs. National accounts data files are backed up both locally and in the data processing centre. However, national accounts data are not stored in a time series database.

0.2.2 Measures to ensure efficient use of resources are implemented.

Measures to ensure efficient use of resources are implemented. For example, Computer Assisted Telephone Interviewing technology is being introduced progressively in relevant areas of Turkstat. There is currently no formal staff appraisal scheme. However, performance criteria are being developed for measuring staff performance and for career planning.

0.3 Relevance

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

Under the Statistics Law of Turkey (Article 20) a high level advisory body, the Statistical Council, was established to provide advice on the preparation and implementation of the Official Statistics Program. Its functions also include identifying areas in which official statistics are required and providing advice on future work programs. The Council includes Undersecretaries of Ministries, the Governor of the Central Bank of the Republic of Turkey (CBRT), and representatives from the Union of Chambers and Stock Exchanges, and academia.

A web-based “User Satisfaction Survey” is now conducted every six months. The results are not published but are used by Turkstat to assess how well user needs are being met. Previously, major user surveys were conducted periodically (e.g. 1996, 2001, and 2004).

User needs and the relevance of the statistical program are also assessed through the Annual Research Symposium, the National Statistics Congress, advisory committees and other ad hoc meetings with government officials.

In May each year Turkstat organizes 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.

Turkstat 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.

A contact person is assigned to deal with requests or questions from users, and unpublished but non-confidential information is made available on demand. Turkstat also sends participants to meetings and seminars of regional and international organizations that examine the content of statistical programs.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

Management is sensitive to issues regarding the quality of statistics. A special unit, the Data Quality Control Unit, has been established within Turkstat to monitor the quality of statistical series. Turkstat has developed a “Strategic Plan, 2007-2011” that is available on its website. The plan includes detailed strategic goals and objectives relating to all statistics produced by Turkstat. Progress towards meeting the strategic goals and objectives is being monitored regularly.

The Strategic Plan proposes the adoption of the Total Quality Management System from 2008.

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

Under Article 41 of the Statistics Law of Turkey a Data Quality Control Committee has been established to review all aspects of statistical work undertaken within Turkstat. It is intended that Quality Reports will be prepared for statistical surveys from 2010.

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

Turkstat is aware of tradeoffs in the production of statistics, especially in the context of its desire to meet EU statistical requirements. The Statistical Council plays an important role in the planning process as many of its members represent organizations that are both users and producers of official statistics.

Emerging data needs are gauged through user surveys, the Annual Research Symposium, the National Statistics Congress, 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. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced 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 schedule of the national accounts. The technical independence of Turkstat is clearly enunciated in Article 17 of the Statistics Law of Turkey. No person or organization outside Turkstat can give instructions to the staff of Turkstat in relation to data sources, selection of statistical methods and procedures; form, content and time of dissemination; or observance of statistical confidentiality.

The professional independence of Turkstat is further enhanced by the Statistics Law of Turkey (Article 23), which provides that the President of Turkstat reports directly to the Prime Minister, is appointed to a renewable five-year term by the Council of Ministers (with a two-term limit), and may not be removed from office (except for a disabling health condition).

Professionalism is promoted and supported within the agency. Staff recruitment is through a Public Service wide 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 Turkstat are explained. The professional development of recruits is further enhanced by giving them the opportunity to work in various departments of Turkstat before being assigned to a permanent job. Recent recruits have also benefited from the opportunity to participate in a training scheme sponsored by the Statistical Office of the European Communities (Eurostat) involving a six month posting to a central statistical office in another country. Finally, promotion to the expert level (the highest in the hierarchy below the managerial level) requires an oral and written examination and the publication of a professional paper.

An internet based training facility has been established for use by new recruits, existing staff and staff of other government departments. This training program which was introduced in

2005 is conducted each Friday throughout the year. Each employee is required to complete approximately 100 hours of technical training in his statistical area. Participation is monitored randomly and the participant is required to complete an exam on the material that is covered by the course.

Staff are also given the opportunity to take part in lectures, conferences and professional meetings.

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

The choice of data sources and statistical techniques is guided solely by considerations of a statistical nature, within the constraints of resource availability and response burden. The timing and format of dissemination of statistical data are determined by Turkstat in view of statistical considerations. An advance release calendar for the coming year is issued in September each year.

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

Under the previous Law on Statistics, the SIS had the authority to comment on misinterpretation and misuse of statistics. The new Statistics Law of Turkey does not explicitly deal with this issue. However, national accounts staff have continued to check references to national accounts data in the media, and Turkstat 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 Statistics Law of Turkey is publicly available and is included on the Turkstat website in both Turkish and English. All Turkstat survey forms make reference to the Statistics Law of Turkey and to data confidentiality. Turkstat 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.

The statistical information compiled by Turkstat cannot be given to any person or authority before it is made available to the public (Statistics Law of Turkey, Article 12). Quarterly national accounts are released to all users through a press release, on the website and on Turkey's National Summary Data Page, at 10.00 a.m. on the pre-announced release date.

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

Under the Statistics Law of Turkey, any data product prepared under that law must be identified as such. 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 Central Bank of the Republic of Turkey (CBRT), the State Planning Office (SPO), or the Ministry of Finance (MOF), are always attributed to Turkstat.

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

In the past major changes to the national accounts have only been made at the time of historical revisions about once a decade. Prior to the release of the upgraded quarterly national accounts in March 2008, Turkstat provided advice on its website concerning the proposed changes to be implemented in the quarterly national accounts.

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 Law of Turkey 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 Turkstat when they join the agency and during the initial two-month training period.

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 revised Turkish national accounts series for the period from 1998 forward are compiled according to the *1995 European System of Accounts (1995 ESA)* and are consequently consistent with the *1993 System of National Accounts (1993 SNA)*.

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. Prior to the latest major revision of the national accounts in March 2008 the system comprised the following elements:

- Value added and gross domestic product (GDP) by activity, at current and constant prices (1987 = 100), annual and quarterly;
- Expenditure on GDP at current and constant prices (1987 = 100), annual and quarterly;
- GDP by income component, annual and quarterly, released once a year;
- Compensation of employees by activity, annual and quarterly, released once a year;
- Rest of the world accounts on an annual basis;
- Occasional square input-output tables (most recently 1990, and 1998); and
- Provincial GDP for the period 1987 to 2001.

In March 2008 revised annual and quarterly estimates were released for the period from 1998 following the implementation of the *1995 ESA* in the Turkish national accounts. These cover the elements above except that the revised series for GDP by income components, compensation of employees by activity and provincial GDP have not yet been released. The base year for constant price estimates was moved to 1998 and chain volume measures were introduced using the “over the year” annual chaining technique. Input-output tables (including supply and use tables) for 2002 have also been released on a *1995 ESA* basis.

Income and capital accounts for the total economy and for the institutional sectors are not compiled, and neither are financial accounts. However, a project has been commenced within the National Accounts Group to develop institutional sector accounts. Also a Working Group including representatives from Turkstat, CBRT, MOF and the Treasury has been established to develop financial accounts. In addition to the regular annual rest of the world accounts, detailed rest of the world accounts have been produced and published for the period 2000 to 2005, showing data in \$US on a monthly basis. Further work is also planned to compile estimates for regional GDP (NUTS level 2) on a *1995 ESA* basis.

The delimitation of the constituent units of the economy is in accordance with the *1993 SNA*. Territorial enclaves in the rest of the world and free trade zones are included. The production boundary is in accordance with the *1993 SNA*. In particular, own-account production of goods for own final consumption, output of goods for own-account fixed capital formation, mineral exploration, computer software, entertainment literary or artistic originals, and informal sector production (indirectly, through under-coverage adjustments in the 2002 benchmark year) are included. No explicit attempt is made to include illegal activities within the production boundary.

The asset boundary is generally in agreement with the *1993 SNA*. A minor departure from the *1993 SNA* relates to the treatment of all expenditure on military equipment and structures, as government final consumption expenditure, except for expenditure on the construction of dwellings provided to the families of military personnel which is included in gross fixed capital formation. Historical monuments are included in gross fixed capital formation. Valuables are also included in the benchmark estimates of capital formation for 2002, but are not separately identified on a quarterly basis.

2.3 Classification/sectorization

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

Institutional units and transactions are classified according to the *1993 SNA*, although there are currently no institutional sector accounts. The industry classification is based on the Statistical Classification of Economic Activities in the European Community (NACE Rev 1.1). The product classification employed for the 2002 Supply and Use Tables is the Statistical Classification of Products by Activity in the European Economic Community (CPA). Household final consumption expenditure is classified according to the Classification of Individual Consumption by Purpose (COICOP). General government aggregates are not classified by the Classification of Functions of Government (COFOG) in the national accounts release. However, the Ministry of Finance now has responsibility for producing government finance statistics (GFS) and is publishing data classifying according to COFOG for central government from 2004 and for local government from 2007.

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 *1993 SNA*. Market output is valued at basic prices. Agricultural output for own-use is valued at equivalent market prices. Other non-market output (of government and non-profit institutions, for instance) is valued at cost. Only the non-deductible part of value added tax (VAT) is included in the valuation of intermediate consumption. Information on insurance and freight for merchandise imports is available. Total exports and imports are valued on an f.o.b. basis.

Foreign Trade statistics are converted to new Turkish Lira using daily exchange rates. For imports of goods the selling rate is used, while for exports of goods the buying rate is used.

2.4.2 Recording is done on an accrual basis.

Transactions are recorded in accordance with the *1993 SNA*, as far as possible on an accrual basis. In general, work in progress is recorded in the period in which it is produced. In principle, work-in-progress on construction is recorded in the period in which it is produced. However, work in progress is not recorded for the rearing of cattle or the cultivation of trees

and orchards. Most general government transactions are initially recorded on a cash basis. However, where possible, explicit adjustments are made to record general government transactions on an approximate accrual basis. In addition, since the government as a rule does not make large retroactive payments to its employees, and public servants are paid on a monthly basis, data for compensation of employees is recorded on an approximate accrual basis.

The Public Financial Management and Control Law (Law no. 5018) makes the Ministry of Finance responsible for the preparation of GFS on a conceptually appropriate basis consistent with the *Government Finance Statistics Manual 2001 (GFSM 2001)* and the *1993 SNA*. As this is a fairly recent development the Ministry of Finance has not yet fully taken over all aspects of the compilation of GFS data. From 2004, data for the central government are being compiled by the Ministry of Finance in accordance with *GFSM 2001*, and hence should be on an accrual basis. Similarly from 2007 data for local government are being compiled by the Ministry of Finance in accordance with *GFSM 2001*.

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

Transactions between establishments within the same enterprise are recorded on a gross basis.

3. Accuracy and reliability

3.1 Source data

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

With the assistance of Eurostat a major project has been undertaken over the last several years to establish a reliable business register. The register now covers all industries except agriculture, fishing and defense. Administrative records from the taxation agency (Revenue Administration) are used to update the register at the end of April each year in respect of the previous calendar year. The annual updates take account of ceased businesses in a reasonably timely fashion. The coverage of the register was significantly expanded by conducting a field enumeration in preparation for the 2002 Census of Industry and Business Establishments. The register includes information on both enterprises and establishments.

The 2000 Building Census provided a significantly enhanced benchmark for estimates of the stock of dwellings, and hence for the estimates of actual and imputed dwelling rent, which are included in household consumption expenditure. Information on the number of electricity subscribers is used to extrapolate the number of dwellings for subsequent years. Data for average rents is obtained on a monthly basis from the Consumer Price Index (CPI), classified by type of house and heating system.

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. With assistance from Eurostat a number of projects are underway to improve the quality of agricultural statistics. There are also fairly comprehensive statistics on fishing.

The annual Structural Business Statistics survey covers most industries except agriculture and fishing. A new annual survey, the Survey of Industrial Production (PRODCOM), was commenced in 2004. It provides data on the quantity and value of products produced by the mining, and manufacturing industries. The monthly survey of manufacturing industry production is an important data source for the quarterly national accounts estimates of value added for manufacturing. A new quarterly survey of service industries is in the process of being developed to provide information on revenue and employment. Although this survey was commenced in 2005 the first results will not be published until about four years data are available. A new quarterly construction industry survey was also introduced in 2006 to provide data on production, orders, employment, wages and salaries, and working hours.

Building and construction used to be estimated on the basis of demand side data. Turkstat collects information on building permits (value and area in square meters, by type of building) and occupancy permits from all municipalities with a population of over 2,000. Most other construction activities (such as road building) are carried out by the State or public corporations, for which direct information is available. However, for the recent historical revision, a commodity flow approach was adopted in order to allow for construction activity that was not being covered by the permit system. The commodity flow approach resulted in a significant adjustment to the level of private gross fixed capital formation on construction in 2002 (up 33.5%). The commodity flow approach is used for all subsequent years although the measure based on permits is still calculated as a consistency check.

Turkstat surveys rely on scientific random sampling. Automated editing procedures are applied to questionnaires. Proper imputation methods are used to handle nonresponse, and expansion factors are derived scientifically, based on the sample design. Data collected in the annual structural business survey are sufficiently detailed to derive all key national accounts aggregates, namely output, intermediate consumption, fixed capital formation and changes in inventories.

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. Expansion factors are derived scientifically, based on the sample design. The Labor Force Survey (LFS) has been conducted monthly since 2000; although, data are disseminated quarterly (previously the LFS was conducted on a quarterly basis). The sample size has been increased to 13,000 households each month. The Household Budget Survey (HBS) used to be conducted at seven-year intervals; however, from 2002 the survey is being conducted annually. Data collected include purchases of consumption goods and durable goods, production for own-consumption, and purchases of valuables.

The Public Financial Management and Control Law (Law no. 5018) makes the Ministry of Finance responsible for the preparation of GFS on a conceptually appropriate basis consistent with the *Government Finance Statistics Manual 2001 (GFSM 2001)* and the *1993 SNA*. As this is a fairly recent development the Ministry of Finance has not yet fully taken over all aspects of the compilation of GFS data.

Comprehensive government finance statistics are available on a monthly and an annual basis for the budgetary central government. Annual information on extra-budgetary activities of the central government and on local government units is also available. Turkstat is still conducting a quarterly survey of 600 local government units, but it is expected that this collection can be discontinued in 2009 when the Ministry of Finance is able to provide all the necessary data relating to GFS in a timely fashion. Detailed data are available to measure output, intermediate consumption, gross fixed capital formation and final consumption expenditure of general government.

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. Taxes on production and imports, for instance, are estimated on an assessment basis, a reasonable approximation of taxation accruals. In addition, a specific adjustment is made to value added tax (VAT) data to more closely approximate an accrual basis. The fiscal year of the State, and all enterprises, 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 limited details for intermediate consumption. Compilers are well aware that concepts and definitions underlying source data may differ from those required by the national accounts, and make necessary adjustments. From 2004, data for the general government sector are being compiled by the Ministry of Finance in accordance with *GFSM 2001*, and hence should be on an accrual basis.

The coverage of economic activities in terms of value added for most industries is very good.

3.1.3 Source data are timely.

Sub-annual surveys, annual and sub-annual administrative data, and all the other major statistics used in compiling 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 respect of the annual surveys (particularly the annual structural business survey). As a result, many are simply not used in the compilation of the 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. Essentially, the annual compilation of the

annual accounts involves incorporating the annual data on the revenue and expenditure of general government and public corporations, as well as any revisions to quarterly source data, which are generally quite small.

The 2002 Census of Industry and Business Establishments took many years to process, thereby causing delays in producing the results from subsequent annual business surveys. Results for the 2003 and 2004 annual business surveys were published in 2008.

Table A. 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
Electricity, gas and water	direct	good quarterly sources for output
Construction	commodity flow	compared with building permit based estimate as a check
Wholesale and retail trade	indirect (margin)	new quarterly survey of service industries published in December 2008
Hotels and restaurants	direct	good annual sources for output
Transportation and storage	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	input indicator from LFS times CPI
Education and health	indirect	input indicator from LFS times CPI
Public administration and defense Public education and health	direct	good quarterly source data for central and local government
Taxes less subsidies on products	direct	good quarterly source data

Since the estimation of household consumption, investment in machinery and equipment and private construction 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 2002 supply and use tables.

Table B. GDP in Terms of Expenditure

Component	Main Estimation Method	Main Source
Household consumption:		
Food, beverages and tobacco	commodity flow	no direct source
Clothing and footwear	commodity flow	no direct source
Housing, water electricity etc	direct	good quarterly sources
Furnishings, h/h equipment etc	commodity flow	no direct source
Health	production side indicators	no direct source
Transport & communication	mostly direct, production side indicators	direct information is annual only
Recreation and culture	production side indicators	no direct source
Education	production side indicators	no direct source
Restaurants and hotels	production side indicators	no direct source
Miscellaneous goods & services	production side indicators	no direct source
Government consumption	direct	good quarterly source data for central and local government
Gross fixed capital formation:		
Public sector:		
Machinery and equipment	direct	good quarterly sources at current prices
Construction and public works	direct	good quarterly sources at current prices
Private sector:		
Machinery and equipment	commodity flow	no direct source
Construction	commodity flow	quarterly source data used as a check
Change in inventories	balancing item	GDP – Other Expenditure components
Exports:		
Goods	direct	good monthly data
Services	direct	from BOP
Imports:		
Goods	direct	good monthly data
Services	direct	from BOP

In the case of Turkey, the State and large (especially public) corporations account for a very significant share of output for some activities, and the coverage of these entities is excellent annually, and very good on a quarterly basis, especially for public sector establishments. The

commodity flow approach probably yields reasonable results for private machinery and equipment, and construction. However, the use of a commodity flow approach without information on inventory changes, and the limited possibility to do crosschecks, is problematic for the measurement of household consumption, especially in the absence of independently derived annual estimates. Consequently, it would be desirable to develop direct estimates for household consumption expenditure on goods. Some data for this purpose are available from the new quarterly survey of service industries, the annual structural service industries surveys and the HBS. However, it may be necessary to develop other sources to obtain sufficient commodity detail. NAG hopes to be able to use data compiled from the bar coding system used by retailers to obtain very detailed information on retail sales of goods to households.

3.2 *Assessment of source data*

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

Information 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. Feedback is provided by the NAG to source data areas when there are concerns about the quality of particular statistics. 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 compiling the accounts. Source data are also scrutinized for consistency with related data, and with national accounting concepts, definitions and classifications.

3.3 *Statistical techniques*

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

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 (2002). In other years, estimates are prepared for about 30 economic activities, at the one- or two-digit level of the NACE classification. For manufacturing, the commodity flow system, which has been significantly enhanced during the historical revision, is used to adjust the ratio of intermediate consumption to output for the non-census years.

Estimates of intermediate consumption are compiled for the benchmark year at a sufficiently detailed level. However, fixed ratios (corresponding to the overall ratio of intermediate consumption to output at the one- or two-digit level) in 2002 have been applied for a number of industries.

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 average rent.

Growing crops and rearing of livestock are recorded when harvested or slaughtered. Data on output and intermediate consumption in mining and manufacturing are adjusted for holding gains and losses on inventories.

For construction, the commodity flow approach at constant prices is used to estimate output using the input output ratio in 2002. Construction materials used in dwelling repairs are first deducted, as is cement that is assumed to be used in the production of concrete.

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

Government expenditure, except subsidies, has generally been available on a cash basis. Where possible, adjustments are made to approximate an accrual basis. Taxes on production and imports are initially valued on an assessment basis, using estimates reported by the MOF. The assessment basis is intermediate between cash and accrual valuation. An explicit adjustment is made to put VAT data on an accrual basis. Subsidies are valued on an accrual basis. From 2004, data for the general government sector are being compiled by the Ministry of Finance in accordance with *GFSM 2001*, and hence should be on an accrual basis.

Price indices are compiled at a detailed level and largely meet national accounts requirements with respect to concepts, coverage, and reference periods. Double-deflation is used for agriculture and manufacturing. Output volume indicators are used to extrapolate value added in mining, electricity, construction, wholesale and retail trade, hotels and restaurants, part of transport and storage, communications, and financial services. Single deflation of value added is employed for communications, and part of transport. Labor input measures from the LFS are used for business services, personal services, education, health and public administration and defense. 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 for constant price estimates is 1998 and chain volume measures are compiled using the “over the year” annual chaining technique.

Expenditure approach procedures

Among GDP expenditure components, government final consumption, public gross fixed capital formation, 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 and construction are derived using the commodity flow approach.

Household final consumption expenditure, external trade and investment in machinery and equipment are compiled according to the Classification of Broad Economic Categories, United Nations, 1989 (BEC), itself an aggregation of the Standard International Trade Classification, Revision 3 (SITC, Rev. 3). The BEC comprises some 20 categories, covering intermediate consumption, final consumption and capital goods. Government final consumption expenditure is now compiled according to COFOG. Gross fixed capital formation is compiled by type of asset.

With respect to volume measurement, specific price indices/deflators are used to deflate expenditure on GDP components. The deflation is done at a detailed level for household final consumption expenditure using COICOP categories, and using the Purchasing Power Parity (PPP) classification for gross fixed capital formation. Deflation of household final consumption expenditure is done indirectly by deflating independently the results of the commodity flow compilation, namely, imports, exports, trade margins, and taxes. A more generally accepted and straightforward approach would be to simply deflate the current price household consumption expenditure using the detailed components of the CPI, which would require some reworking of Turkstat's compilation system for this component of GDP.

Exports and imports of goods are deflated using unit value indices calculated by the International Trade section of Turkstat. In some instances, volume measures are extrapolated and deflators are calculated implicitly. The household consumption implicit deflator is broadly consistent with the 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”).

The base year for constant price estimates is 1998 and chain volume measures are compiled using the “over the year” annual chaining technique.

None of the quarterly national accounts series are seasonally adjusted.

3.3.2 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 measure of GDP, by including value added from informal and hidden legal activities. For the historical revision of the national accounts released in March 2008 significant improvements were made to the exhaustiveness of the measure of GDP in the benchmark year 2002. For a number of industries, including manufacturing, hotels and restaurants, other business services, recreation and cultural services and other services, an undercoverage adjustment was obtained by comparing employment in the Labor Force Survey (LFS) with employment from the 2002 Census of Industry and Business Establishments. This method is referred to as the “labor input method”. It is one of the

methods recommended in *Measuring the Non-Observed Economy – A Handbook*. However, the undercoverage adjustment has been moved forward from 2002 using the level of activity in each industry rather than being calculated using LFS data for subsequent years.

For construction, the previously compiled estimates were compared with those derived from a commodity flow approach for construction materials. This comparison indicated a significant understatement in construction output as derived from the traditional sources. Consequently, the commodity flow method was used to estimate construction output for all years covered by the historical revision.

It is believed that small businesses are minimizing their reported income for taxation purposes by understating their income and overstating their operating expenses. Investigations, including sending surveys to accountants, are being undertaken in an effort to estimate the level of the resulting understatement of value added. However, at this stage no explicit adjustments are being made to value added on account of this type of misreporting.

3.4 Assessment and validation of intermediate data and statistical outputs

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

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

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Estimates of household final consumption expenditure are compared with corresponding estimates derived from the annual HBS. This exercise has revealed a puzzling difference between the national accounts estimates and the HBS results for most categories of household final consumption expenditure, with the national accounts estimates being much higher. The extent of these differences was increased following the recent historical revision of the national accounts. Although both areas of Turkstat are conscious of this issue, a satisfactory explanation for the differences has not yet been found. Part of the explanation is believed to be due to a cultural behavior in Turkey not to reveal the full extent of ones income and expenditure, even to other family members.

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. This arises because of the extensive use of the commodity flow approach to derive some major expenditure components of GDP. The discrepancy between GDP in terms of production and GDP in terms of expenditure is allocated entirely to the expenditure side, on the assumption that the production estimate is more reliable. In practice, this is done in the quarterly national

accounts by deriving changes in inventories as a balancing item at both current and constant prices (changes in inventories therefore also includes the statistical discrepancy).

The supply and use framework was used to compile benchmark estimates of GDP for the year 2002. Work is in progress on the compilation of balanced SUT for 2003 and 2004. The intention is that SUT will be compiled on an annual basis.

3.5 Revision studies

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

Except for those occasions when major historical revisions are incorporated into the accounts, revisions are generally quite small, due to the current revision cycle of only one year, which does not provide time to incorporate results of major annual surveys. Systematic revision studies have not been undertaken.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

Turkstat meets the Special Data Dissemination Standard (SDDS) with respect to the periodicity of the GDP estimates. Estimates of GDP are published quarterly at current and constant prices.

4.1.2 Timeliness follows dissemination standards.

Turkstat meets or exceeds the SDDS with respect to timeliness. Estimates for the first and fourth quarters are released 90 days after the reference quarter, while those for the second and third quarters are released 70 days after the reference quarter.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

The estimates of GDP by activity and by expenditure component are internally consistent from a conceptual standpoint. The production measure is regarded as the official measure of GDP. Following the historical revision (covering the period from 1998), an independent expenditure measure of GDP is not produced in the quarterly national accounts, because no estimate is derived for changes in inventories. Instead changes in inventories and the implicit statistical discrepancy are combined as a single item. On an annual basis the same applies except for those years for which balanced supply and use tables have been compiled (to date only 2002).

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 equality between them, as annual figures are obtained by summation to a large extent.

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

An historical revision of the Turkish national accounts was released in March 2008. The revision involved major improvements to the quality of the estimates, as well as the implementation of the *1995 ESA*. The base year for constant price estimates was moved from 1987 to 1998. However, the revision has resulted in a major discontinuity in the national accounts time series. The revised series cover the period from 1998 forward.

The previously published series are still available on the Turkstat website up to 2007, third quarter. The annual series commence in 1923 while the quarterly series start in 1987. Generally, when changes in source data, methodology or statistical techniques are introduced, historical series are reconstructed as far back as reasonably possible. While this is also the intention on this occasion, there are, as yet, no specific plans for how to reconstruct the series for years prior to 1998.

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

The external trade data used to compile the expenditure measure of GDP are totally consistent with those shown in the balance of payments. This consistency is confirmed each quarter as part of the regular editing process.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

With the release of the 1998-2006 historical revision, Turkstat has announced a new revisions policy. In future, it is proposed to publish the preliminary quarterly GDP estimates approximately 70-90 days after the reference quarter, to revise the quarters of the current year, while data for the previous years will remain frozen until the next annual revision. Revisions will be conducted once a year for the most recent three or four years based on the availability of annual supply and use tables. From time to time, Turkstat will conduct historical revisions to correspond to major updates of international standards and/or the availability of new data sources. It will take some time before this new policy is fully operational.

The current revision policy, which has been in effect since the early 1990s, is familiar to users and has been quite stable from year to year. Revisions are usually small because data from independent annual sources are generally not incorporated into the accounts. 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.

4.3.2 Preliminary and/or revised 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.

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

Revisions to national accounts 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; and (ii) by major expenditure category, with additional detail for household consumption expenditure by major COICOP category, along with a short analytical commentary. It would be beneficial to users if some additional information could be shown in the release, including:

- Income components of GDP;
- Compensation of employees by industry;
- Gross national income;
- The sequence of accounts for the total economy;
- More detailed components of gross fixed capital formation; and
- Implicit price deflators.

Interpretation of the quarterly national accounts would be enhanced if all series were seasonally adjusted.

5.1.2 Dissemination media and format 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 Turkstat, the *Main Economic Indicators* of the State Planning Organization (SPO) (monthly) and the annual national accounts publication (last issue 2000), as well as on the Turkstat website and the

Central Bank of Turkey and SPO websites. 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 preannounced schedule.

The Advance Release Calendar for the coming year is posted on the Turkstat website in September. A notice to this effect is published in the Monthly Bulletin of Statistics. 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.

5.1.5 Statistics not routinely disseminated are made available upon request.

Non-published but non-confidential detailed data are made available to users upon request. However, users are no longer advised of this service in the quarterly national accounts release.

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 was published in *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.

The NAG is in the process of producing the GNI Inventory which is required by Eurostat. This document will provide current information at a very detailed level on the concepts, sources and methods used to compile Turkey's national accounts.

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 points for each subject field are publicized.

All statistical releases and publications indicate the mailing address, telephone and fax numbers, and e-mail address of the specific divisions of the National Accounts Department

that are responsible for the compilation of the statistics, as well as contact information for ordering the hardcopy publication.

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

The list of Turkstat publications is updated daily on the Turkstat website. The price of various statistical products is clearly disclosed and assistance is provided in placing orders.

RECOMMENDATIONS

High priority

- Integrate a regular annual estimation process into the existing—mainly quarterly based—extrapolation system for compiling the national accounts. To this end, construct annual supply and use tables in current and constant prices using data from the annual structural business survey and other available sources.
- Compile a more independent measure of household final consumption expenditure, both annually and quarterly, using data from the annual business survey for retail and service industries, the new quarterly service industry collection, and other sources.
- Collect information on changes in inventories (at least for the major stock holding industries—mining, manufacturing and wholesale and retail trade) on a quarterly basis.
- Produce results from the annual structural business survey on a more timely basis.
- Compile and publish the sequence of accounts for the total economy on an annual—and preferably quarterly—basis.
- Seasonally adjust all published quarterly national accounts estimates.

Other

- Reconstruct the GDP series on the new *1995 ESA* basis as far back as possible.
- Publish a series for gross national income in the next quarterly national accounts release (necessary data are available from the BOP), ensuring that migrant transfers are not taken into account.
- Publish estimates for the income components of GDP and compensation of employees by industry as part of the quarterly national accounts release.
- Publish more components of gross fixed capital formation (such as software, mineral exploration expenditure) in the quarterly national accounts.

- Calculate explicit adjustments for the non-observed economy on an annual basis, rather than extrapolating the 2002 benchmark estimates.
- Develop a methodology for adjusting value-added for the understatement of income and overstatement of expenses in data collected from businesses.
- Develop and publish institutional sector accounts.
- When available, use export and import price indices for goods for deflation purposes instead of unit value indices.
- Conduct and publish periodic analyses of revisions to inform compilers and users of the national accounts.
- Implement the new revisions policy announced in the document “Implementation of the ESA-95 in Turkey and the 1998-2006 Historical Revision” (included with the quarterly national accounts release on the Turkstat website).
- Publish additional analytical series in the quarterly national accounts, including GDP per capita, GDP per person employed, and implicit price deflators.
- Make the quarterly national accounts publication more user-friendly by: (i) publishing series in millions rather than thousands of YTL; (ii) avoiding percentage changes for “changes in inventories plus statistical discrepancy,” as these are not meaningful; and (iii) publishing shares of GDP in current prices only.
- Advise users of the availability of unpublished national accounts series through the press release and the website.
- Provide contact details for the National Accounts Group on the national accounts press release and on the website (in addition to the general contact detail already shown).

Table 1. Turkey: Data Quality Assessment Framework (July 2003): Summary of Results for National Accounts
(Compiling Agency: Turkish Statistical Institute)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				No sequence of accounts for the whole economy.
2.2 Scope			X			
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data			X			No quarterly data for changes in inventories. Timeliness of annual structural business survey (SBS) needs to be improved.
3.2 Assessment of source data		X				Data from the annual SBS and other sources need to be incorporated. Changes in inventories is derived residually.
3.3 Statistical techniques			X			
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies			X			Revision studies limited to comparisons of old and new series for periodic historical revisions.
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice		X				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
5. Accessibility						
5.1 Data accessibility			X			No seasonally adjusted estimates. Limited analyses of results. Publish more components of gross fixed capital formation.
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

II. CONSUMER PRICE INDEX

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The 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. That Law was supplemented by Decrees No's 219, 357 and 403 in 1984, 1989, and 1990, respectively. A revised statistical law was prepared, with a view to making Turkey's statistical provisions fully consistent with Eurostat guidelines in support of Turkey's candidacy for European Union (EU) membership. The new law, the Statistics Law of Turkey No. 5429, was enacted on November 10, 2005. This new law totally replaces all previous legislation relating to the production of statistics in Turkey.

The new law establishes the basic principles and standards concerning the production and organization of official statistics. It provides for the creation of the Turkish Statistical Institute (TURKSTAT) and specifies its duties and authorities which are to collect, assess and disseminate all kinds of statistics relating to the economic, social, and cultural activities of the country, and to ensure coordination among other institutions and organizations that are involved in the statistical process prescribed in the Official Statistics Program (Article 1).

The Official Statistical Program (OSP) establishes the framework for official statistics that should be produced on subjects required at the national and international levels. Censuses and surveys are carried out within the framework of this Program. Taking into account existing resources, respondent burden, and cost-benefit analyses, the Program specifies the statistics needed to determine and monitor the situation of the country in the fields of the economy, social issues, demography, culture, environment, science, technology and any other required areas. The OSP is a detailed five year plan prepared by TURKSTAT with the benefit of advice from the Statistical Council (a high level advisory body that is technically part of TURKSTAT). The OSP needs to be approved by the Council of Ministers and its implementation is the responsibility of TURKSTAT. TURKSTAT produces an annual report on the implementation of the program (Article 3).

The technical independence of TURKSTAT is clearly enunciated in Article 17 of the Turkish Statistical Law. No person or organization outside TURKSTAT can give instructions to the staff of TURKSTAT in relation to data sources, selection of statistical methods and procedures; form, content and time of dissemination; and observance of statistical confidentiality.

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

TURKSTAT has a central role in coordinating the whole statistical system in Turkey. The duties and authorities of TURKSTAT are proscribed in Article 18 of the Statistics Law of Turkey. TURKSTAT is responsible for preparing the Official Statistical Program and for monitoring its implementation. TURKSTAT is responsible for determining the statistical methods, definitions, classifications and standards to be used in the production of official statistics (both within TURKSTAT and other institutions) in line with national and international norms. Each year TURKSTAT issues an advance release calendar for all official statistics.

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

Article 13 of the Statistics Law of Turkey states that individual reporters' data should not be provided to any administrative, judiciary or military authority, or person. Under Article 53 of the Statistics Law of Turkey staff who violate these provisions are liable to imprisonment and a (nominal) fine according to Article 258 of the Turkish Penal Code no. 5237.

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.

Article 14 of the Statistics Law of Turkey allows unit record data to be provided for research purposes provided that any information that could be used to identify individual respondents has been removed from the data file.

Steps are taken to secure the premises of the data-producing agency, and computer systems are password protected to prevent unauthorized access to data which is limited according to need.

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

According to Articles 7 and 9 of the Turkish Statistical Law, TURKSTAT 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 TURKSTAT. TURKSTAT 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 an administrative fine (Article 54). 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, fined.

To assist respondents to the annual business surveys to correctly complete their questionnaires, commonly used commercial accounting codes for relevant items have been included for each data item in the survey questionnaire. This practice was introduced for the survey in respect of reference year 2005 and continued in subsequent surveys.

0.2 Resources

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

The CPI Team responsible for overseeing the compilation of the CPI is part of the Price Statistics Group within the Department of National Accounts and Economic Indicators. The Price Statistics Groups consists of two teams, the CPI Team and the PPI Team. The CPI Team is composed of one supervisor and 13 other professionals who are tasked with the review of price data collected by the 26 TURKSTAT regional offices. They are also responsible for review and analysis of the price indices compiled for all of the 26 regions and at the national level.

There are approximately 200 TURKSTAT employees in the regional offices involved in the collection and processing of price data for the CPI, the PPI, the Construction Cost Index and the International Comparison Program (ICP) from which purchasing power parities are compiled. Although the regional directors, supervisors and some other regional staff members are permanent staff, a large number the regional employees are contract employees with one-year contracts. The authorities indicate that adequate funding is available for the price statistics programs.

For permanent staff, turnover is not a problem especially for the CPI Team, where most of the staff members have more than ten years experience and no staff member has less than two years experience. All permanent staff and most contract staff hold college degrees both in Ankara and in the regional offices.

Information technology is an area that has experienced significant improvement in recent years. All staff members have individual computers that are adequate for work requirements. A state of the art Oracle database is used for data capture and index processing. Price data are entered into the database in the regional office via a direct internet link to Ankara. The compiled price series are also stored in the database. Backup and security measures are in place for all basic data and compiled indices. Excellent facilities are available for teleconferencing and internet-based training.

0.2.2 Measures to ensure efficient use of resources are implemented.

The activities of the Department of National Accounts and Economic Indicators, and their budgetary implications, are reviewed each month against the targets of the TURKSTAT work plan. After consultations with Group Leaders, the Department Head sends a report to management each month, which tracks performance of staff against a critical path for each

task within the groups as well as the monthly use of budgetary allocations. The Finance Department of the TURKSTAT in turn regularly informs the departments regarding budget developments and possible additional allocations from unspent resources.

Programs are in place to minimize processing errors and improve the monitoring of price data for extreme values due to data collection and data entry errors. The data processing system allow for the comparison of price and index data across regions and over time. 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. The price collection effort is subject to random audits to ensure that the highest standards of quality are being met.

0.3 *Relevance*

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

Under the Statistics Law of Turkey (Article 20) a high level advisory body, the Statistical Council, was established to provide advice on the preparation and implementation of the Official Statistics Program. Its functions also include identifying areas in which official statistics are required and providing advice on future work programs. The Council includes Undersecretaries of Ministries, the Governor of the Central Bank of Turkey, and representatives from the Union of Chambers and Stock Exchanges, and academia.

A web-based “User Satisfaction Survey” is now conducted every six months. The results are not published but are used by TURKSTAT to assess how well user needs are being met. Previously, major user surveys were conducted periodically (e.g., 1996, 2001, and 2004).

User needs and the relevance of the statistical program is also assessed through the Annual Research Symposium, the National Statistics Congress, advisory committees and other ad hoc meetings with government officials.

In May each year TURKSTAT organizes 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.

TURKSTAT 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.

A contact person is assigned to deal with requests or questions from users, and unpublished, but non-confidential information, is made available on demand. TURKSTAT also sends participants to meetings and seminars of regional and international organizations that examine the content of statistical programs.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

Management is sensitive to issues regarding the quality of statistics. A special unit, the Data Quality Control Unit, has been established within TURKSTAT to monitor the quality of statistical series. TURKSTAT has developed a “Strategic Plan, 2007-2011” that is available on its website. The plan includes detailed strategic goals and objectives relating to all statistics produced by TURKSTAT. Progress towards meeting the strategic goals and objectives is being monitored.

The Strategic Plan proposes the adoption of the Total Quality Management System from 2008.

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

Under Article 41 of the Statistics Law of Turkey a Data Quality Control Committee has been established to review all aspects of statistical work undertaken within TURKSTAT. It is intended that Quality Reports will be prepared for statistical surveys from 2010.

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

TURKSTAT is aware of tradeoffs in the production of statistics, especially in the context of its desire to meet EU statistical requirements.

Emerging data needs are gauged through user surveys, the Annual Research Symposium, the National Statistics Congress, 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. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

The CPI is compiled on an impartial basis and there is no external pressure on the content or the release schedule of the CPI. The technical independence of TURKSTAT is clearly enunciated in Article 17 of the Turkish Statistical Law. No person or organization outside TURKSTAT can give instructions to the staff of TURKSTAT in relation to data sources, selection of statistical methods and procedures; form, content and time of dissemination; and observance of statistical confidentiality.

Professionalism is promoted and supported within the agency. Staff recruitment is through a Public Service wide competition that includes both written and oral examinations. Upon

arrival at the agency, new recruits take a one-month training course during which the mission and responsibilities of TURKSTAT are explained. The professional development of recruits is further enhanced by giving them the opportunity to work in various departments of TURKSTAT before being assigned to a permanent job. Recent recruits have also benefited from the opportunity to participate in a Eurostat training scheme involving a six month posting to a central statistical office in another country. 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.

An internet based training facility has been established for use by new recruits, existing staff and staff of other government departments. This training program which was introduced in 2005 is conducted each Friday throughout the year. Each employee is required to complete approximately 100 hours of technical training in his statistical area. Participation is monitored randomly and the participant is required to complete an exam over the material that is covered by the course.

Every December two or three staff members from the TURKSTAT regional offices are brought into the central office for face-to-face technical training. These training sessions are conducted using teleconferencing with all appropriate regional staff. Upon return to the regional offices, the participants conduct face-to-face training as needed with the regional staff.

Staff members are also given the opportunity to take part in lectures, conferences and professional meetings.

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

The choice of data sources and statistical techniques is guided solely by considerations of a statistical nature, within the constraints of resource availability and response burden. The Price Statistics Group 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. The timing and format of dissemination of statistical data are determined by TURKSTAT in view of statistical considerations. An advance release calendar for the coming year is issued in September each year.

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

Under the previous Law on Statistics, the SIS had the authority to comment on misinterpretation and misuse of statistics. The new Statistics Law of Turkey does not explicitly deal with this issue. However, prices staff have continued to check references to price index data in the media, and TURKSTAT requests clarification or correction when warranted. The practice of the Price Index Group is to draft a letter to the agency involved correcting the errors made. The letter is signed by the President of TURKSTAT, 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 Statistics Law of Turkey is publicly available and is included on the TURKSTAT website in both Turkish and English. All TURKSTAT survey forms make reference to the Statistics Law of Turkey and to data confidentiality. TURKSTAT 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.

There is no outside access to the CPI prior to its release.

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

Under the Statistics Law of Turkey, any data product prepared under that law must be identified as such. The name, logo and insignia of TURKSTAT appear in all publications, press releases and on the TURKSTAT website. Likewise, CPI data reproduced by other institutions are always attributed to TURKSTAT.

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

Major changes in the CPI compilation system are discussed in advance with important user groups prior to the release of the index series that incorporate these changes.

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 members are made aware of the guidelines and the mission and traditions of TURKSTAT when they join the agency and during the initial one-month training period.

2. Methodological soundness

2.1 Concepts and definitions

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

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

Expenditure data on both services and commodities are tabulated in sufficient detail to permit analysis at all levels of detail for the five-digit Classification of Individual Consumption by Purpose Adapted to the Needs of Household Budget Surveys (CIOCOP-HBS).

2.2 Scope

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

The CPI covers all private households residing in the country irrespective of income, nationality, and social or residential status, including persons living in institutional households, such as students living in dormitories and military families.

Only monetary expenditures relating to household consumption are included in the CPI market basket weights. Hence, consumption of goods produced at home, such as home grown food, and housing services produced by homeowners (imputed rent) are excluded from the CPI market basket. Gifts are included for the purchasing households but not for the consuming households.

Up until the 2005 CPI revision, the Turkish CPI for urban households had a rental equivalence component, and the CPI for rural households had a component for own produced food. Starting in 2005 the two series were combined into one national CPI, and both rental equivalence and own produced food were excluded from the index on the basis that the new CPI would reflect only monetary expenditures related to consumption.

It should be noted that although own-produced goods and services, and imputed rent are excluded from the CPI market basket, estimates of the value of consumption for these items are available from the HBS. In addition, there is no alternative component to cover owner-occupied housing. The lack of a component to represent housing costs for homeowners in the CPI is a significant deficiency in the index, especially given that owner-occupants are estimated to constitute 70 percent of the households in Turkey. When rental equivalence (with a weight based on imputed rent for homeowners) is not used in the CPI, it is recommended that an alternative measure of the cost of housing for homeowners be used. One alternative is the measurement of the net acquisition of residential property supplemented by expenditures on additions and alterations. This would be the market basket weight which would be moved by a house price index.

In spite of the fact that the Eurostat Harmonized Index of Consumer Prices (HICP) does not have a component for owner-occupied housing due to a lack of being able to come to agreement as to how it should be measured, this does not justify the exclusion of this component from a national CPI. One simple alternative for Turkey would be the compilation of a separate CPI that includes rental equivalence for homeowners. This index could be published along with a number of separate indices that are compiled and disseminated to measure core inflation. The advantage of this approach is that the data for compiling this index are already available. The market basket weight would be derived from HBS tabulations on imputed rent, and this weight would be moved in the new separate index by the rent index from the current CPI.

2.3 Classification/sectorization

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

All classification and coding for expenditure data from the Household Budget Survey (HBS) and for the CPI market basket, monthly price survey, and index dissemination are done using a ten-digit national classification system based on the five-digit COICOP-HBS.

2.4.1 Market prices are used to value flows and stocks.

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

2.4.2 Recording is done on an accrual basis.

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

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

The internationally recommended procedure for estimating the CPI market basket weights for durable goods, especially large durable goods such as vehicles, is to base the weights on net purchases (purchases net of sales) for these goods. For the current CPI, the market basket weights for durable goods, including vehicles, were estimated using the total value of purchases only. For most durable goods this is adequate, since sales of smaller durable goods tend to be insignificant. However, for vehicles, this procedure is not adequate since it is typical to have significant sales as well as purchases of vehicles by consumers.

The CPI Team has indicated that since the sales data for durable goods are available from the continuous HBS, the market basket weights for 2009 will be estimated using net purchases of durable goods.

3. Accuracy and reliability

3.1 Source data

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

Beginning in January 2005 TURKSTAT began compilation and dissemination of a new CPI based on the 2003 Household Budget Survey (HBS) that covers all types of households in the economic territory of the country irrespective of income, nationality, and social or residential status.¹ The new index replaced an urban CPI and a rural CPI that had market basket weights derived from the 1994 Household Income and Consumption Expenditure Survey. For the current CPI, a national index and 26 regional indices are compiled based on 26 separate regional market baskets with separate lists of items and weights. While the old CPI covered only 34 provinces, the current CPI covers all 81 provinces.

Beginning in 2003, the HBS has been conducted on a continuous basis. In 2003 the entire sample of 25,000 households were surveyed. However, starting in 2004 one third of the 25,000 households is being interviewed each year. The CPI market basket weights are estimated each year based on expenditure tabulations for the last three years of data that are available. The current weights for the new index are based on the HBS for 2004-2006. The reference base for the new index is calendar year 2003=100.

The households for the HBS are interviewed on a flow basis during the entire year. Each household is expected to complete 5 six-day diaries where all types of expenditures are recorded. During the diary month, the households also provide demographic information and income data as well as recall data on expenditures for durable goods and services for the previous eleven months.

The household sample for the HBS is selected using Census of Population data. Starting in 2007, TURKSTAT instituted the continuous Address Based Population Registration System. This system is now being used to construct the sampling frame for selecting new households for the continuous HBS.

¹ Persons living in institutional households are not within the scope of the HBS. In order to determine the distribution of the expenditure of individuals living in institutional households, an Institutional Population Individual Expenditure Survey was conducted in 2005. Results of this survey are used in the Consumer Price Index for the expenditure of individuals in the institutional population.

The HBS household sample is selected using a three-stage sampling procedure based on probability sampling techniques at each stage.² The response rate is approximately 70 percent. Substitute households with similar demographic and housing characteristics are used to substitute for non-respondents.

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. However the current CPI does not have a rental equivalences component to represent owner-occupied housing.

Approximately 360,000 price quotations are collected for 454 basic items, consisting of 851 sub-items or specifications, from approximately 25,000 outlets in 81 provinces for the monthly price survey. Most of these prices are collected by personal visits from price collectors in Ankara and the 26 regional TURKSTAT offices. For fresh fruits and vegetables and fuels prices are collected on a weekly basis, and for most other items prices are collected twice monthly during the weeks including the 10th and the 20th of the month. Rents are priced monthly from a sample of 3945 rental units.

The outlets in the outlet sample are selected on the basis of experience of the price collectors and their knowledge of the local market. The main selection criteria in each locality are the coverage of the available shopping areas within each location and the degree to which different types of outlets are represented. The number of outlets sampled varies depending on the size of the locality and the type of item being priced. Once each year, usually in November and December, the outlet sample is reviewed and updated.

The outlet sample covers different types of outlets, from market stalls, craft shops, traditional shops, single-line retail shops, big shopping centers, restaurants, hotels and catalogues. Prices for fresh fruits and vegetables and fish are collected from market stalls as well as from supermarkets and traditional shops.

When possible Turkstat staff attend international training seminars and workshops and also monitor international statistical publications to ensure that up to date procedures are employed in data collection, data processing, classification, and index compilation.

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

The HBS is designed and conducted in close coordination with the compilation of the CPI. Since the definitions, scope and classification systems are the same for both datasets, the estimation of new CPI market basket weights on an annual basis using the continuous HBS is greatly facilitated.

² As additional information, the HBS household sample is selected by the stratified two-stage cluster sampling method. Also, starting in 2009 the sample size of the HBS is to be increased to about 12,500 and the principle that non-respondents are replaced by substitute households is to be discontinued.

The CPI monthly price survey is also designed in a manner that facilitates the compilation of the monthly CPI. The same COICOP-HBS classification system and the same concepts that are used for the market basket weights are used for index compilation.

3.1.3 Source data are timely.

Since the household sample for the continuous HBS is divided equally between three years, the market basket weights for the CPI are estimated using three years of HBS expenditure data. The current weights are based on the HBS for 2004-2006. This allows only one year for processing the HBS for the last year (of the three years) before the data are used in the CPI. This is an outstanding turn around cycle.

The monthly price survey is conducted and processed in a manner that allows the index to be compiled and disseminated on the third business day of the month following the reference month. Fresh fruits and vegetables and fish are priced weekly and most other components are priced biweekly. The collected price data are processed on a flow basis in order to allow for the processing of 360,000 prices per month to be entered into the database and properly reviewed. Turkstat is to be complimented on the timeliness and thoroughness of the process that is carried out each month.

3.2 Assessment of source data

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

Each year the expenditure tabulations from the continuous HBS used to estimate the new market basket weights are thoroughly reviewed and evaluated for geographic consistency across the 26 regions and for atypical values. These new weights emerging from the HBS are also assessed against corresponding data from other sources such as the national accounts, the PPI, retail trade, export trade, and imports. It is apparent that for some components such as alcoholic beverages, tobacco, and some durable goods there is underreporting of expenditures. Weights for these items are estimated taking into consideration corresponding data from other sources.

It is generally acknowledged that the overall level of expenditures reported in the HBS understates significantly the actual expenditures, since corresponding production and sales data from the national accounts is higher. This, however, is not a significant problem for the estimation of CPI market basket weights since these weights are expressed in proportions (percentages) rather than in absolute values. Of course, there could be a problem if specific types of expenditures are more underreported than others. Wherever this was identified adjustments were made.

The mission engaged in a lengthy discussion with the HBS and prices staff in order to identify an obvious cause for the overall understatement of expenditures in the HBS. Turkstat seemed to be doing everything possible avoid the problem. The list of substitute households

were held by the supervisors so that the interviewers could not choose the substitute households without making a good faith effort and so that they could not select the structure/household that looked to be the easiest to interview. Individual diaries were given to all household members making expenditures. Internal edits were made to determine whether, for example, households with automobiles had expenditures for benzene. In the same light household members were asked whether they were smokers, to determine whether there should be expenditures on tobacco. It was noted that the response rate on the five six-day diaries filled out by the households during the survey month did not seem to deteriorate over the month. Comparisons between reported income and total household expenditures were also made to determine where expenditure might be left out. The problem, of course, is that the income data, as with most household budget surveys, is not reliable either. The one overall conclusion was the because of cultural traditions, the Turkish people are very private about their incomes and expenditures, even among family members. It is obvious that in order to resolve this problem additional research will be required.

Since the household sample for the HBS is designed such that non-respondents are replaced with similar households, there is not a non-response problem per say. However, there could be a self-selection bias among those who choose not to participate. It is possible that the non-participating households have similar characteristic that are not taken into account with the household substitution process. Since the non-response rate is approximately 30 percent, this effect could be significant. Nonetheless, it appears that short of greatly expanding the sample and using extensive non-interview adjustment factors, there is not an obvious solution to this problem.

Prices data from the monthly price survey are thoroughly verified both in the regional offices as well as in the central office. Atypical prices are verified with the respondents. Cross regional checks are made for all price and index data. Independent audits of price collection are made on a random basis and reports of the conclusions of these audits are given to the supervisor of the price collector involved for an explanation.

3.3 *Statistical techniques*

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

In general, methodologically sound procedures are employed in estimating CPI market basket weights, processing monthly price data, and compiling the monthly CPI. Strict procedures are in place for reviewing and monthly price data to avoid coding, editing and tabulation errors. Atypical values are verified with the respondent and only change when it is determined that an error has occurred.

The market basket weights, the outlet sample, and the list of products and specifications are reviewed and updated each year. Since the market basket item list and the product specification are reviewed and updated each year there is no significant problem with disappearing products. However, when a specified product is not available in a given outlet, an imputed price is calculated using either the price change of another comparable product,

the average price change of similar products, or the index change of the subgroup to which the product pertains. If the product specification continues to be unavailable a substitute specification is priced. 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. Appropriate quality adjustments are made using a variety of internationally recommended techniques.

For seasonally unavailable items, such as fresh fruits and vegetables and some clothing items, monthly weights are used. Missing prices are carried forward while their weights are shifted to similar items until the items are again available for pricing. This process is carefully monitored to identify any shift in the seasonal availability of these items.

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

The weights for the CPI are estimated using the concept of monetary expenditures associated with personal consumption. In most cases this conforms to the concepts of consumption expenditures outlined in the *1993 SNA* and the *CPI Manual*. However, in some cases there are differences. Own produced consumption goods and services such as home grown food and imputed rent for homeowners are excluded from the CPI market basket weights in Turkey, since they are not monetary expenditures. It is common practice in many countries to exclude home produced food from the CPI market basket since these expenditures tend to be small, particularly in urban areas. However, in the case of owner-occupied housing, there is a problem with not including a component to represent the value of the housing services consumed by homeowners. In the case of Turkey, 70 percent of the households are owner-occupants. If rental equivalence is not used, it is recommended that net purchases of residential dwellings be used to represent housing costs for homeowners. Neither approach is used for the CPI market basket. In other respects, the recommendations concerning the valuation of consumption goods follow internationally recommended procedures. Purchases of goods and services are valued at the actual prices paid by households regardless of the method of payment.

Methodological techniques used to compile the CPI generally follow international recommendations. Elementary aggregates are compiled using geometric means. Higher-level aggregates are compiled using the Laspeyres index formula that compares prices in the current period with prices in December of the previous year. New market basket weights based on three years of HBS expenditure data are introduced each year. These weights are updated for price change between the HBS survey years and the December in which they are linked into the index. While the real base (the period from which the expenditure weights are drawn) of the index changes each year, the reference base for the CPI continues to be 2003=100. For the current CPI, the weights are estimated using expenditure data from the HBS surveys of 2004-2006.

3.4 Assessment and validation of intermediate data and statistical outputs

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

Validation of CPI indices is carried out on a regular basis by comparing these data with corresponding price and index data from the PPI, including agricultural price data, as well as export and import price data.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Atypical index behavior is assessed on a continuous basis. Each month, the behavior of the CPI indices at all levels is compared across the 26 regions to help detect errors in data collection and/or index processing.

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

Geographical aggregation of indices to obtain the national index and imputation procedures for missing prices are carried out in a manner that do not produce inconsistent aggregate results regardless of the order of aggregation.

3.5 Revision studies

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

Each year thorough studies are conducted with regard to the revision of market basket weights, the outlet sample, the list of market basket items, and the product specifications for price collection. The basic source data for these studies are expenditure tabulations for each of the 26 regions from the continuous HBS, the annual tourism survey, and a special annual survey for the institutional population. Additional sources, including retail sales data and industrial production data, are also used for certain items such as alcohol and tobacco product that tend to be underestimated by the HBS. One study carried out, with regard to market basket weights, is a comparison of expenditure shares by product and group across the 26 regions of the country.

Reports are written to inform the authorities of the results of these studies. These reports are then distributed to the regional office so that the index can be updated. This process also informs the data collection effort and the HBS. For example, the HBS household sample is being expanded due to insufficient expenditure data in some geographic areas.

4. Serviceability

4.1 *Periodicity and timeliness*

4.1.1 Periodicity follows dissemination standards.

The CPI is compiled and published monthly, thus meeting SDDS standards.

4.1.2 Timeliness follows dissemination standards.

The CPI is published on the third work day of the month following the reference month, thus exceeding SDDS standards.

4.2 *Consistency*

4.2.1 Statistics are consistent within the dataset.

Index aggregation procedures ensure that aggregates of regional indices at all levels of detail are consistent with corresponding indices at the national level.

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

When a major index revision takes place, the old index is carried forward using price changes from the new series and weights from the old series. The new index is also compiled with the new weights going backward to the reference base for the new series. Continuous CPI data at the national level are available since 1980.

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

The CPI data are consistent with corresponding data from other national statistical series such as the RPI, the PPI, agricultural price statistics, and the national accounts.

4.3 *Revision policy and practice*

4.3.1 Revisions follow a regular and transparent schedule.

The market basket weights for the CPI are updated on an annual basis using tabulations on expenditure data from the continuous HBS. Given that under the structure of the continuous HBS one third of the household sample is interviewed each year, the CPI market basket weights are derived from three years of HBS expenditure data. The current weights for the CPI are based on the HBS data for the years 2004-2006. Although new weights are linked into the index each year, the reference base for the index is maintained as calendar year 2003=100. It should be emphasized that this transition to an annual chained CPI is a significant accomplishment eliminating the need for costly and time consuming periodic major revisions of the index. An important advantage of this type of index is that

improvement to the CPI can be introduced on a flow basis each year. It also provides a framework for updating the sample of outlets for price collection, the list of market basket items, and the product specifications.

4.3.2 Preliminary and/or revised data are clearly identified.

All CPI indices are final when published. Since they are not subject to revision and/or correction, there are no preliminary indices.

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

Although thorough revision studies are conducted when weights, outlets, items and specifications are revised each year using the results of the continuous HBS and other sources, these studies are technical in nature and are not really appropriate for dissemination. However, reports are written to the authorities and distributed to the regional office so that index can be updated.

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 principal results of the CPI are disseminated every month on the Internet and in the hardcopy “Press Release: Consumer Price Index Month/Year.” The press release includes: (1) A brief analysis of the important changes in the index; (2) A chart comparing the 12-month percent changes for the current and previous year; (3) A series of tables presenting percent changes for one month, 12 months, current month to December of the previous year, and a 12 month moving average of percent changes. These tables cover the 12 major COICOP groups, the 26 regions, historical indices for four years and special indices such as core inflation indices. In addition complete historical data are available on the TURKSTAT website. In spite of presenting a number of different types of percent changes, the tables are well designed and easily readable. This is enabled by using the same general format for all of the tables that are presented.

5.1.2 Dissemination media and format are adequate.

Both the hard copy monthly CPI press release and the more detailed tables CPI tables available on the Turkstat website have well designed formats. The website has site map that is very useful in locating the index data for each dataset.

5.1.3 Statistics are released on a preannounced schedule.

The CPI is released on the third business day of the month following the reference month of the index.

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

The CPI is simultaneously released to all users on the Turkstat website and at a press conference held at Turkstat headquarters each month. No advance information is provided to anyone outside of Turkstat.

5.1.5 Statistics not routinely disseminated are made available upon request.

Turkstat sponsors an excellent website that allows index users to download detailed historical price statistics data. The content/format of the tables can be determined by the index user. Monthly index data are available starting in 1980 for the national CPI. At both the national level and the regional level detailed index data are available for virtually all index series compiled by Turkstat on the reference bases of 1994 and 2003. Many of the series are extended forward and backward on these two reference bases. There is no charge for use of this service.

5.2 Metadata accessibility

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

Metadata on the CPI are available in both Turkish and English on the Turkstat website. In addition to providing detailed information on the current index, there are also metadata on historical index series. Although these metadata are relatively complete, it would be desirable to have a separate document giving a complete formal documentation of the methods employed for compiling the CPI.

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

Turkstat provides information on statistical series to suits the needs of different types of index users. In addition to detailed metadata, there is, for example, a brochure on frequently asked questions concerning the CPI and the PPI.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

The Turkstat website lists the contact persons by each statistical dataset, and their telephone numbers and e-mail addresses for queries and data requests.

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

The Turkstat website contains exhaustive lists of databases, index series, publications, and research documents. The excellent site map is extremely helpful in finding any type of

information that is available. While most of the documents and index series can be downloaded without charge, for those statistical products which are sold, the information and prices on how to obtain the items is well presented.

RECOMMENDATIONS

- Estimate the CPI market basket weights of durable goods using households' net purchases.
- Expand CPI coverage to include housing costs for owner-occupants, possibly by compiling a separate index similar to those used to measure core inflation.
- Continue research to determine the cause of the underestimation of personal consumption expenditures by the HBS.
- Prepare a detailed formal documentation of the methodology employed for compiling the CPI.

Table 2. Turkey: Data Quality Assessment Framework (July 2003): Summary of Results for the Consumer Price Index
(Compiling Agency: Turkstat)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				The CPI is lacking a component to represent owner occupied housing.
2.2 Scope			X			
2.3 Classification/sectorization		X				Durable goods weights: Sales of durable goods not netted out from purchases.
2.4 Basis for recording			X			
3. Accuracy and reliability						
3.1 Source data		X				
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of source data		X				
3.5 Assessment and validation of intermediate data and statistical outputs		X				
3.6 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

III. PRODUCER PRICE INDEX

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The 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. That Law was supplemented by Decrees No's 219, 357 and 403 in 1984, 1989, and 1990, respectively. A revised statistical law was prepared, with a view to making Turkey's statistical provisions fully consistent with Eurostat guidelines in support of Turkey's candidacy for European Union (EU) membership. The new law, the Statistics Law of Turkey No. 5429, was enacted on November 10, 2005. This new law totally replaces all previous legislation relating to the production of statistics in Turkey.

The new law establishes the basic principles and standards concerning the production and organization of official statistics. It provides for the creation of the Turkish Statistical Institute (TURKSTAT) and specifies its duties and authorities which are to collect, assess and disseminate all kinds of statistics relating to the economic, social, and cultural activities of the country, and to ensure coordination among other institutions and organizations that are involved in the statistical process prescribed in the Official Statistics Program (Article 1).

The Official Statistical Program (OSP) establishes the framework for official statistics that should be produced on subjects required at the national and international levels. Censuses and surveys are carried out within the framework of this Program. Taking into account existing resources, respondent burden, and cost-benefit analyses, the Program specifies the statistics needed to determine and monitor the situation of the country in the fields of the economy, social issues, demography, culture, environment, science, technology and any other required areas. The OSP is a detailed five year plan prepared by TURKSTAT with the benefit of advice from the Statistical Council (a high level advisory body that is technically part of TURKSTAT). The OSP needs to be approved by the Council of Ministers and its implementation is the responsibility of TURKSTAT. TURKSTAT produces an annual report on the implementation of the program (Article 3).

The technical independence of TURKSTAT is clearly enunciated in Article 17 of the Turkish Statistical Law. No person or organization outside TURKSTAT can give instructions to the staff of TURKSTAT in relation to data sources, selection of statistical methods and procedures; form, content and time of dissemination; and observance of statistical confidentiality.

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

TURKSTAT has a central role in coordinating the whole statistical system in Turkey. The duties and authorities of TURKSTAT are proscribed in Article 18 of the Statistics Law of Turkey. TURKSTAT is responsible for preparing the Official Statistical Program and for monitoring its implementation. TURKSTAT is responsible for determining the statistical methods, definitions, classifications and standards to be used in the production of official statistics (both within TURKSTAT and other institutions) in line with national and international norms. Each year TURKSTAT issues an advance release calendar for all official statistics.

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

Article 13 of the Statistics Law of Turkey states that individual reporters' data should not be provided to any administrative, judiciary or military authority, or person. Under Article 53 of the Statistics Law of Turkey staff who violate these provisions are liable to imprisonment and a (nominal) fine according to Article 258 of the Turkish Penal Code no. 5237.

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.

Article 14 of the Statistics Law of Turkey allows unit record data to be provided for research purposes provided that any information that could be used to identify individual respondents has been removed from the data file.

Steps are taken to secure the premises of the data-producing agency, and computer systems are password protected to prevent unauthorized access to data which is limited according to need.

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

According to Articles 7 and 9 of the Turkish Statistical Law, TURKSTAT 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 TURKSTAT. TURKSTAT 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 an administrative fine (Article 54). 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, fined.

To assist respondents to the annual business surveys to correctly complete their questionnaires, commonly used commercial accounting codes for relevant items have been included for each data item in the survey questionnaire. This practice was introduced for the survey in respect of reference year 2005 and continued in subsequent surveys.

0.2 Resources

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

The PPI Team responsible for overseeing the compilation of the PPI is part of the Price Statistics Group within the Department of National Accounts and Economic Indicators. The Price Statistics Groups consists of two teams, the CPI Team and the PPI Team. The PPI Team is composed of one supervisor, three statisticians, one civil engineer, and one assistant expert. These professionals are tasked with the review of price data collected by the 26 TURKSTAT regional offices. They are also responsible for review and analysis of the producer price indices that are compiled at a national level.

There are approximately 200 TURKSTAT employees in the regional offices involved in the collection and processing of price data for the CPI, the PPI, the Construction Cost Index and the International Comparison Program (ICP) from which purchasing power parities are compiled. Although the regional directors, supervisors and some other regional staff members are permanent staff, a large number the regional employees are contract employees with one-year contracts. The authorities indicate that adequate funding is available for the price statistics programs.

For permanent staff, turnover is not a problem especially for the Price Statistics Group, where most of the staff members have more than ten years experience and no staff member has less than two years experience. All permanent staff and most contract staff hold college degrees both in Ankara and in the regional offices.

Information technology is an area that has experienced significant improvement in recent years. All staff members have individual computers that are adequate for work requirements. A state of the art Oracle database is used for data capture and index processing. Price data are entered into the database in the regional office via a direct internet link to Ankara. The compiled price series are also stored in the database. Backup and security measures are in place for all basic data and compiled indices. Excellent facilities are available for teleconferencing and internet-based training.

0.2.2 Measures to ensure efficient use of resources are implemented.

The activities of the Department of National Accounts and Economic Indicators, and their budgetary implications, are reviewed each month against the targets of the TURKSTAT work plan. After consultations with Group Leaders, the Department Head sends a report to management each month, which tracks performance of staff against a critical path for each task within the groups as well as the monthly use of budgetary allocations. The Finance

Department of the TURKSTAT in turn regularly informs the departments regarding budget developments and possible additional allocations from unspent resources.

Programs are in place to minimize processing errors and improve the monitoring of price data for extreme values due to data collection and data entry errors. The data processing system allow for the comparison of price and index data over time. 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. The price collection effort is subject to random audits to ensure that the highest standards of quality are being met.

0.3 *Relevance*

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

Under the Statistics Law of Turkey (Article 20) a high level advisory body, the Statistical Council, was established to provide advice on the preparation and implementation of the Official Statistics Program. Its functions also include identifying areas in which official statistics are required and providing advice on future work programs. The Council includes Undersecretaries of Ministries, the Governor of the Central Bank of Turkey, and representatives from the Union of Chambers and Stock Exchanges, and academia.

A web-based “User Satisfaction Survey” is now conducted every six months. The results are not published but are used by TURKSTAT to assess how well user needs are being met. Previously, major user surveys were conducted periodically (e.g., 1996, 2001, and 2004).

User needs and the relevance of the statistical program is also assessed through the Annual Research Symposium, the National Statistics Congress, advisory committees and other ad hoc meetings with government officials.

In May each year TURKSTAT organizes 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.

TURKSTAT 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.

A contact person is assigned to deal with requests or questions from users, and unpublished, but non-confidential information, is made available on demand. TURKSTAT also sends participants to meetings and seminars of regional and international organizations that examine the content of statistical programs.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

Management is sensitive to issues regarding the quality of statistics. A special unit, the Data Quality Control Unit, has been established within TURKSTAT to monitor the quality of statistical series. TURKSTAT has developed a “Strategic Plan, 2007-2011” that is available on its website. The plan includes detailed strategic goals and objectives relating to all statistics produced by TURKSTAT. Progress towards meeting the strategic goals and objectives is being monitored.

The Strategic Plan proposes the adoption of the Total Quality Management System from 2008.

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

Under Article 41 of the Statistics Law of Turkey a Data Quality Control Committee has been established to review all aspects of statistical work undertaken within TURKSTAT. It is intended that Quality Reports will be prepared for statistical surveys from 2010.

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

TURKSTAT is aware of tradeoffs in the production of statistics, especially in the context of its desire to meet EU statistical requirements.

Emerging data needs are gauged through user surveys, the Annual Research Symposium, the National Statistics Congress, 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. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced on an impartial basis.

The PPI is compiled on an impartial basis and there is no external pressure on the content or the release schedule of the PPI. The technical independence of TURKSTAT is clearly enunciated in Article 17 of the Turkish Statistical Law. No person or organization outside TURKSTAT can give instructions to the staff of TURKSTAT in relation to data sources, selection of statistical methods and procedures; form, content and time of dissemination; and observance of statistical confidentiality.

Professionalism is promoted and supported within the agency. Staff recruitment is through a Public Service wide competition that includes both written and oral examinations. Upon

arrival at the agency, new recruits take a one-month training course during which the mission and responsibilities of TURKSTAT are explained. The professional development of recruits is further enhanced by giving them the opportunity to work in various departments of TURKSTAT 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.

An internet based training facility has been established for use by new recruits, existing staff and staff of other government departments. This training program which was introduced in 2005 is conducted each Friday throughout the year. Each employee is required to complete approximately 100 hours of technical training in his statistical area. Participation is monitored randomly and the participant is required to complete an exam over the material that is covered by the course.

Every December two or three staff members from the TURKSTAT regional offices are brought into the central office for face-to-face technical training. These training sessions are conducted using teleconferencing with all appropriate regional staff. Upon return to the regional offices, the participants conduct face-to-face training as needed with the regional staff.

Staff members are also given the opportunity to take part in lectures, conferences and professional meetings.

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

The choice of data sources and statistical techniques is guided solely by considerations of a statistical nature, within the constraints of resource availability and response burden. The Price Statistics Group 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. The timing and format of dissemination of statistical data are determined by TURKSTAT in view of statistical considerations. An advance release calendar for the coming year is issued in September each year.

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

Under the previous Law on Statistics, the SIS had the authority to comment on misinterpretation and misuse of statistics. The new Statistics Law of Turkey does not explicitly deal with this issue. However, prices staff have continued to check references to price index data in the media, and TURKSTAT requests clarification or correction when warranted. The practice of the Price Index Group is to draft a letter to the agency involved correcting the errors made. The letter is signed by the President of TURKSTAT, 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 Statistics Law of Turkey is publicly available and is included on the TURKSTAT website in both Turkish and English. All TURKSTAT survey forms make reference to the Statistics Law of Turkey and to data confidentiality. TURKSTAT 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.

There is no outside access to the PPI prior to its release.

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

Under the Statistics Law of Turkey, any data product prepared under that law must be identified as such. The name, logo and insignia of TURKSTAT appear in all publications, press releases and on the TURKSTAT website. Likewise, PPI data reproduced by other institutions are always attributed to TURKSTAT.

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

Major changes in the PPI compilation system are discussed in advance with important user groups prior to the release of the index series that incorporate these changes.

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 members are made aware of the guidelines and the mission and traditions of TURKSTAT when they join the agency and during the initial one-month training period.

2. Methodological soundness

2.1 Concepts and definitions

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

In general, the definitions, the determination of items for monthly price collection, and the estimation of weights for the PPI are based on concepts consistent with the *1993 SNA* and the *PPI Manual*. However, index compilation is done exclusively by commodity aggregation. The PPI is not compiled by economic activity or industry. Under an economic activity-based or industry-based PPI compilation system secondary goods are taken into account directly. The PPI Manual recommends that both product-based and industry-based PPIs be compiled.

2.2 Scope

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

The PPI covers agriculture, mining and manufacturing, and energy, fuel and water. Although the PPI covers all sales of production to the domestic market, sales of production for export are excluded. The service sector is also excluded. Turkstat plans to expand the coverage of the PPI to include exports and services in 2011.

Since the weights for the PPI at the two-digit NACE level (for some sectors at the three or four-digit NACE level), are based on data from the national accounts, all industrial sales turnover estimated in the national accounts, with the exception of production sold for export, is included in the weights. In other words, the coverage of the PPI reflects the sales from all enterprises, including those sales that are estimated/imputed for non-reporting enterprises in the industrial surveys used for compiling the national accounts.

2.3 Classification/sectorization

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

Turkstat has adopted European standards for the classification of economic activities and production. For the PPI, economic activities are classified using the Statistical Classification of Economic Activities in the European Community, Revision 1.1 (NACE, Rev 1.1). The product classification is based on the System for Collection and Dissemination of Statistics on the Production of Manufactured Goods (PRODCOM). The eight-digit product classification system associated with PRODCOM (PRODCOM List) is used for the classification of products in the PPI except that the national classification system includes three extra digits to provide for additional detail.

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 generally valued at basic prices, factory-gate prices including VAT. However, in the case of agricultural products, due the difficulty of obtaining true farm-gate prices, the prices used are sometimes prices obtained at farmers' markets, usually the first point of sale for the product. This is a common practice for agricultural prices.

2.4.2 Recording is done on an accrual basis.

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

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

Transactions between establishments within the same enterprise are recorded on a gross basis for the determination of PPI derived from national accounts data.

3. Accuracy and reliability

3.1 Source data

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

Beginning in January 2005 TURKSTAT began compilation and dissemination of a new annually chained PPI with weights from two years prior to the current year. For the 1995 index, the weights were estimated using data from annual tabulations of sales data from industrial and agricultural surveys conducted in 2003. For the current year the weights were derived from calendar year 2006 data. However, the reference base for the current PPI is still 2003.

Data for compiling the PPI are obtained from a number of sources. The first is the monthly Industrial Production Survey for Manufacturing and Mining. This survey covers directly approximately 80 percent of the value of production. Each year the monthly data a tabulated by product across all establishments. For each 10 digit PRODCOM code, the establishments are presented in descending order of the value of total domestic sales of the product. The establishments that account for approximately 80 percent of sales of the product are included in the PPI establishment sample.

For electricity, factory-gate sales are determined using data from the Electricity Generation Corporation, Inc., the Turkish Electricity Trade and Contracting Corporation, and the Electricity Distribution Corporation for Turkey. The data obtained accounts fro 100 percent of the sales of electricity. Water data are obtained directly from the municipalities and from the Agricultural and Environment Department.

Agricultural data on sales are obtained from the monthly Survey of Agricultural Production. Average price data are obtained on a monthly basis from the Agricultural and Environmental Department.

The sampling frame used for the monthly Industrial Production Survey for Manufacturing and Mining is the new Business Register that is constructed using data on establishments obtained from Ministry of Finance tax registry revenue reports.

Since the weight data for the PPI come from GDP estimates from the national accounts for higher levels of aggregation—NACE, two-digit level, and sometime three and four-digit levels, the PPI covers all product sales to the domestic market.

Approximately 13,200 price quotations are collected from approximately 1,725 establishments for 756 COICOP products. The number of monthly price quotations and establishments surveyed was increased significantly with the 2005 revision of the PPI.

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

Since the PPI, the industrial and agricultural surveys, and the national accounts in Turkey are compiled using Eurostat recommendations including the use of NACE, Rev 1 for classifying economic activities and the PRODCOM List for classifying products, the concepts, definitions, valuations and time of recording are consistent for the source data and the PPI .

3.1.3 Source data are timely.

The current weights for the PPI are for calendar year 2006. This is an outstanding turn around cycle since the sales data from the industrial and agricultural surveys are processed in only one year. In other words the data for calendar year 2006 are processed and tabulated during 2007 to be used for determining weights and new product and establishment samples in December of 2007 for compilation of the PPI for 2008.

The monthly price survey is conducted and processed in a manner that allows the index to be compiled and disseminated on the third business day of the month following the reference month. A monthly form is used to collect by mail, fax, or e-mail, prices referring to the 5th, 15th and 25th of each month. Approximately 13,000 price quotations collected from 1725 establishments are entered into the database and properly reviewed. Turkstat is to be complimented on the timeliness and thoroughness of the process that is carried out each month to compile the PPI.

3.2 Assessment of source data

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

Product weights, the lists of products and establishments selected for price collection for the PPI are evaluated on a regular basis. Any irregularities are verified against the source data including the monthly industrial and agricultural surveys and the national accounts weight data that are provided for the compilation of the PPI. This process serves as feedback for improvement of the monthly industrial and agricultural surveys.

Prices data from the monthly price survey are thoroughly verified both in the regional offices as well as in the central office. Atypical prices are verified with the respondents. Consistency checks are made with corresponding price data from the CPI and export and import unit values.

3.3 Statistical techniques

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

In general, methodologically sound procedures are employed in estimating PPI weights, processing monthly price data, and compiling the monthly PPI. Strict procedures are in place for reviewing and monthly price data to avoid coding, editing and tabulation errors. Atypical values are verified with the respondent and only changed when it is determined that an error has occurred.

The index weights, the establishment sample, and the list of products and specifications are reviewed and updated each year. Since the weights and list of the products and product specification are reviewed and updated each year there is no significant problem with disappearing products. However, when a specified product is not available in a given establishment, an imputed price is calculated using either the price change of another comparable product, the average price change of similar products, or the index change of the subgroup to which the product pertains. If the product specification continues to be unavailable a substitute specification is priced. For items that are permanently unavailable in a particular location, a replacement establishment that carries the same item is selected or a new variety that is similar in quality is selected. Appropriate quality adjustments are made using a variety of internationally recommended techniques.

For seasonally unavailable items, such as fresh fruits and vegetables, monthly weights are used. Missing prices are carried forward while their weights are shifted to similar items until the items are again available for pricing. This process is carefully monitored to identify any shift in the seasonal availability of these items.

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

Methodological techniques used to compile the PPI generally follow international recommendations. Weighted arithmetic means are used to combine basic price observations at the first level of aggregation. The weights used at this level are based on volume of sales data obtained from the establishments where the prices are being collected. Higher-level aggregates are compiled using the Laspeyres index formula that compares prices in the current period with prices in December of the previous year. New weights based on tabulations of industrial and agricultural surveys, and GNP data from the national accounts are introduced each year. These weights are updated for price change between the survey year and the December in which they are linked into the index. While the real base (the period from which weights data are drawn) of the index changes each year, the reference base for the PPI continues to be 2003=100. For the current PPI, the weights are estimated for calendar year 2006.

3.4 Assessment and validation of intermediate data and statistical outputs

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

Validation of PPI indices is carried out on a regular basis by comparing these data with corresponding price and index data from the CPI, and export and import price data.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

Unusual movements in the monthly index are investigated and either corrected or explained in the monthly press release.

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

Imputation procedures for missing prices are carried out in a manner that does not produce inconsistencies in the aggregate index over time.

3.5 Revision studies

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

Each year thorough studies are conducted with regard to the revision of PPI weights, the establishment sample, the list of products, and the product specifications for price collection. The basic source data for these studies are the annual tabulations of sales by product and establishment derived from monthly industrial and agricultural surveys. Reports are written to inform the authorities of the results of these studies. These reports are then distributed to the regional office so that the index can be updated.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The PPI is compiled and published monthly, thus meeting SDDS standards.

4.1.2 Timeliness follows dissemination standards.

The PPI is published on the third work day of the month following the reference month, thus exceeding SDDS standards.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

Since PPI tabulations are made only by product aggregation, and not by industry (economic activity), there is no issue with regard to internal consistency between the two types of aggregation. Aggregation procedures employed are consistent.

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

When a major index revision takes place, the old index is carried forward using price changes from the new series and weights from the old series. The new index is also compiled with the new weights going backward to the reference base for the new series.

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

The PPI data are consistent with corresponding data from other national statistical series such as the CPI, the national accounts, and certain components of the export and import unit value indices.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

The PPI weights, the establishment sample for price collection, the list of products and the product specifications are updated annually. These updates are based on annual tabulations for the monthly industrial and agricultural surveys. The current weights for the PPI are based on value of sales data for 2006. Although new weights are linked into the index each year, the reference base for the index is maintained as calendar year 2003=100. It should be emphasized that this transition to an annual chained PPI is a significant accomplishment eliminating the need for costly and time consuming periodic major revisions of the index. An important advantage of this type of index is that improvement to the PPI can be

introduced on a flow basis each year. It also provides a framework for updating the sample of establishments for price collection, the list products, and the detailed product specifications used for pricing.

4.3.2 Preliminary and/or revised data are clearly identified.

All PPI indices are final when published. Since they are not subject to revision and/or correction, there are no preliminary indices.

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

Although thorough revision studies are conducted when the PPI weights, the sample of establishments, the list of products, and the product specifications are revised each year, these studies are technical in nature and are not really appropriate for wide dissemination. However, reports are written to the authorities and distributed to the regional office so that index can be updated.

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 principal results of the PPI are disseminated every month on the Internet and in the hardcopy “Press Release: Producer Price Index Month/Year.” The press release includes: (1) A brief analysis of the important changes in the index; (2) A chart comparing the 12 month percent changes for the current and previous year; (3) A series of tables presenting percent changes for one month, 12 months, current month to December of the previous year, and a 12 month moving average of percent changes. These tables cover NACE categories at the two-digit level and historical indices for four years. In addition, complete historical data are available on the TURKSTAT website. In spite of presenting a number of different types of percent changes, the tables are well designed and easily readable. This is enabled by using the same general format for all of the tables that are presented.

5.1.2 Dissemination media and format are adequate.

Both the hard copy monthly PPI press release and the more detailed tables PPI tables available on the Turkstat website have well designed formats. The website has site map that is very useful in locating the index data for each dataset.

5.1.3 Statistics are released on a preannounced schedule.

The PPI is released on the third business day of the month following the reference month of the index.

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

The PPI is simultaneously released to all users on the Turkstat website and at a press conference held at Turkstat headquarters each month. No advance information is provided to anyone outside of Turkstat.

5.1.5 Statistics not routinely disseminated are made available upon request.

Turkstat sponsors an excellent website that allows index users to download detailed historical price statistics data. The content/format of the tables can be determined by the index user. Monthly historical index data are available for the national PPI at the two-digit and three-digit NACE levels. Historical index data are also available on the 1994 reference base. Historical average price data are available at the ten-digit COICOP List level. There is no charge for use of this service.

5.2 Metadata accessibility

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

Metadata on the PPI are available in both Turkish and English on the Turkstat website. In addition to providing detailed information on the current index, there are also metadata on historical index series. Although these metadata are relatively complete, it would be desirable to have a separate document giving a complete formal documentation of the methods employed for compiling the PPI.

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

Turkstat provides information on statistical series to suits the needs of different types of index users. In addition to detailed metadata, there is, for example, a brochure on frequently asked questions concerning the CPI and the PPI.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

The Turkstat website lists the contact persons by each statistical dataset, and their telephone numbers and e-mail addresses for queries and data requests.

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

The Turkstat website contains exhaustive lists of databases, index series, publications, and research documents. The excellent site map is extremely helpful in finding any type of information that is available. While most of the documents and index series can be

downloaded without charge, for those statistical products which are sold, the information and prices on how to obtain the items is well presented.

RECOMMENDATIONS

- In addition to compiling a PPI by product aggregations, develop a PPI compiled by economic activity or industry. This PPI would take into account secondary products.
- Expedite planned expansion of PPI coverage by compiling export indices.
- Move forward with plan to further expand PPI coverage to include the service sector, possibly on a flow basis, beginning with public transportation and communication.
- Prepare a detailed formal documentation of the methodology employed for compiling the PPI in Turkey.

Table 3 . Turkey: Data Quality Assessment Framework (July 2003): Summary of Results for the Producer Price Index
(Compiling Agency: Turkstat)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions			X			The PPI is compiled only by product and not by economic activity. Exports are not included in the PPI.
2.2 Scope			X			
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data		X				
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of source data		X				
3.5 Assessment and validation of intermediate data and statistical outputs		X				
3.6 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency		X				
4.3 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

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.*

Article 23 of the Establishment Law No. 540 authorizes the State Planning Organization (SPO) in the Office of the Prime Minister to collect data required for compiling macroeconomic statistics, including government finance data for the public sector, necessary for the preparation of Turkey's Annual Programs. The SPO data on public sector finance are also used for budgetary preparation purposes. In addition, since 2001, the SPO has been responsible for preparing Turkey's Pre-Accession Economic Programs (including public finances) and submitting them to the European Commission. Further, the SPO has been a key source of information on extrabudgetary funds, social security institutions, and local governments covered in the IMF program-designed fiscal statistics published by the Treasury and the SPO. The SPO publishes annual data on Turkey's public sector finance on its website.

Articles 30 and 53 of the Public Financial Management and Control Law (PFMCL) No. 5018, enacted in December 2003, authorize the Ministry of Finance (MOF) to compile and disseminate government finance statistics for the general government and to impose sanctions on institutions that do not provide timely and comprehensive data to it. Under this authority, the MOF is to establish compilation standards and practices, including coverage, accounting framework, and methods of recording and valuation, for government finance statistics. Accordingly, the By-Law on General Budget Accounting and the By-Law on Central Government Accounting, introduced by the MOF in 2006 and 2007 respectively, provide the basic rules for government accounting. In addition, under the PFMCL, the MOF has the responsibility to publish monthly budgetary revenue and expenditure data for the central government and quarterly data on the local government. The MOF is also to report government finance statistics to the IMF. With the implementation of the PFMCL, the MOF has enhanced the coverage and periodicity of government finance statistics that it publishes on its website.

Under the Law on Regulating Public Finance and Debt Management and under Article 2a of the Law on the Structures and Duties of the Undersecretariat of Treasury, the Undersecretariat of the Treasury (Treasury) in the Office of the Prime Minister is responsible for compiling financing data for the budgetary central government. Combining the MOF's data on revenue and expenditure of the budgetary central government and its own data on financing, the Treasury publishes data on the finance of the budgetary central government on a monthly basis. In addition, as noted above, it publishes on its website fiscal data as defined under previous IMF programs for Turkey. Further, the Treasury is responsible for compiling data on debt of the public sector, which are published on the Treasury website.

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. Consultations also take place among agencies to reconcile differences. Closer coordination among the three agencies will streamline their data compilation efforts.

Pursuant to the PFMCL, as the MOF has assumed the responsibility of compiling data on the local government, which currently is also undertaken by the SPO, closer consultations with the SPO in the transition period will facilitate the MOF's compilation of consolidated local government data with appropriate adjustments, thereby enhancing the quality of the data. Such consultations will also facilitate the MOF's compilation of the general government data.

In addition, pursuant to the PFMCL as the MOF moves toward compiling and disseminating general government data on a timely, accurate, and comprehensive basis, protocols on data submission, data sharing, and quality control will need to be formalized beyond existing ones with the Treasury and extrabudgetary funds; in particular, they are to include local government entities and social security institutions. The MOF has initiated efforts in this area with training programs under way for local government officials.

0.1.3 Individual reporters' 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 compilation of statistical aggregates.

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

The PFMCL gives the MOF the right of access to data for statistical compilation.

0.2 Resources

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

Existing staff resources are sufficient to carry out current responsibilities. The MOF's implementation in 2006 of a standard chart of accounts for use by central and local government entities and the MOF's establishment of the say2000i government accounting system also for use by central government and local government entities have enhanced the efficiency of the MOF's compilation of government finance statistics; they have also contributed to the significant progress the MOF has made in improving the coverage and periodicity of its government finance statistics. Further, they have facilitated the MOF's incorporation of international standards—the IMF's *Government Finance Statistics Manual 2001 (GFSM 2001)* and the *European System of Accounts 1995 (ESA 1995)*—in its compilation of such data.

Staff involved in compiling government finance statistics have improved their skills through training. However, specific measures are not in place to encourage retention of such trained staff.

Computer and other technology resources are adequate to meet current needs.

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 fiscal management process.

0.3 Relevance

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

As noted in 0.1.1.above, various datasets are compiled and disseminated to meet specific needs of users. The SPO compiles and publishes data on the public sector as part of its preparation of Turkey's Annual Programs and other policy-related documents, as well as its contributions to the budget preparation. The MOF compiles and publishes detailed data on revenue and expenditure separately on the central government and on the local government; these data inform on the impact of fiscal policy on the various government sectors. The MOF also reports data in the *GFSM 2001* presentation to the IMF for publication in the IMF *Government Finance Statistics Yearbook*. The Treasury compiles financing and debt data to inform policymakers on borrowing requirements.

Turkstat periodically undertakes users' surveys to monitor the relevance of Turkey's official macroeconomic statistics (including fiscal data) in meeting users' needs.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

Statistical production is an integral part of normal operations of responsible agencies. The focus is on the application of appropriate accounting rules, since accounting records represent the primary source data for various fiscal datasets.

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

The Court of Accounts audits aggregate budgetary government financial data against data of individual government accounting offices at the end of the year.³ The Treasury and the MOF check the consistency of data on revenue, expenditure, and financing on an ongoing basis.

³ Except for the parliament and the presidency.

The PFMCL mandates the application and publication of uniform accounting standards, in line with international standards.

Government finance statistics are based on accounting records. Data reported to the IMF in the *GFSM 2001* format are produced through the use of a bridge table drawing data from the national presentations.

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

Steps have been taken to enhance data quality, including improved coverage, periodicity, and timeliness. Data requirements for (previous) IMF programs and accession to the European Union have provided impetus for the improvements in data quality.

A national rolling five-year statistical plan is in place to guide further developments, including those for government finance statistics. The plan calls for improving data quality and addressing new and emerging data needs.

Three major targets set for government finance statistics are:

- the implementation of the PFMCL, which, among other items, authorizes the MOF to set government accounting rules in line with the International Public Sector Accounting Standards (IPSASs) and to collect data from relevant entities to compile government finance statistics at the general government level on a frequent and timely basis;
- the introduction of accrual accounting and the migration to *GFSM 2001* compilation framework; and
- the introduction of the say2000i computerized accounting system at the central and local government levels to facilitate the collection of data over the Internet from government accounting entities and tax collection offices.

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. The PFMCL establishes the professional independence of the departments responsible for these statistics.

Staff involved in compiling government finance statistics continue to need substantial training to compile government finance statistics in the *GFSM 2001* framework.

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

Staff 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.

Compilers of government finance statistics are allowed to explain technical aspects of the statistics and to respond publicly to misinterpretations of the statistics. Explanatory material, to aid in the interpretation of the statistics, is provided on a regular basis. Additional information is also provided when asked.

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 formulation of government financial policy and related planning processes. Article 53 of the PFMCL stipulates the periodicity of compilation: quarterly for general government data, monthly for central government data, and quarterly for social security institutions and the local government. The Official Statistics Program, issued by the Cabinet of Ministers, also sets forth the responsibilities of agencies, the periodicity of data to be produced and disseminated, and their advance release calendars.

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

Using authorized passwords, officials of the SPO and the Treasury have access to the say 2000i database that the MOF maintains. This information is being posted among Turkey's metadata for the SDDS.

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. The Official Statistics Program defines roles of agencies in the production of statistics. Further clarifications for linkages of government finance statistics can help guide users in the understanding of differences in the published statistics and reduce the potential of data misinterpretations.

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

There have been major changes in methodology, source data, or statistical techniques in the recent years and advance notice has been given of some of these changes, including updates in Turkey's metadata for the SDDS. Beginning with the data for 2006 for the budgetary

central government, the MOF has started compiling and reporting to the IMF data presented in the *GFSM 2001* framework. Beginning with data for 2007, the MOF has expanded such compilation and reporting to cover data on the central government. The MOF plans to expand such compilation and reporting to cover central and local governments for the year 2009, and to cover the general government (including social security) for the year 2010.

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. In addition, Article 52 of the PFMCL defines responsibilities of accounting and statistical staffs involved in data compilation and dissemination, requiring their adherence to international standards, as well as principles of integrity and reliability. However, at this time, there are no specific 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.

Concepts and definitions of budgetary data are broadly consistent with those in the *Manual of Government Finance Statistics 1986 (GFSM 1986)*. However, the MOF has started to implement the guidelines of the *European System of Accounts 1995 (ESA 95)* and the *Government Finance Statistics Manual 2001 (GFSM 2001)*, including accrual recording of transactions.

The migration to the *GFSM 2001* framework is included in Turkey's rolling five-year statistical plan. A bridge table has been developed aligning national classifications to those set forth in the *GFSM 2001*. In addition, the coverage of the general government and its subsectors has been delineated in conformance with concepts and definitions of the *ESA 1995* and the *GFSM 2001*. The MOF has introduced a new chart of accounts for use by central and local government entities. It has also established standard accounting rules, including the recording of transactions on an accrual basis, to be followed by central and local government entities. The say2000i automated accounting system accessible by central and local government entities provides a central data source for government finance statistics, facilitating the compilation and quality control of data.

The MOF has started applying the *GFSM 2001* framework in compiling and reporting to the IMF for publication in the IMF's *GFSY* data on the budgetary central government.⁴ It is in

⁴ The MOF intends to compile fiscal data according to the *ESA 1995*; and based on those data, report to STA data in the *GFSM 2001* format for publication in the IMF's *Government Finance Statistics Yearbook*.

the process of reporting to the IMF *GFSM 2001* data on the central government for the year 2007. The MOF plans to expand such compilation and reporting on the local government beginning with data for 2009 and to include social security institutions to cover the whole general government beginning with data for 2010.

The MOF has initiated the compilation of an inventory of the government's nonfinancial assets beginning with acquisitions made in 2007; a partial balance sheet for the central government is being developed .

2.2 Scope

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

The data coverage meets the requirements of the Special Data Dissemination Standard, which calls for the dissemination of data on the general government operations, the central government operations, and the central government debt.

The data on the public sector compiled and disseminated on an annual basis by the SPO are comprehensive in scope. Its data on the general government cover the central government, local administrations, extrabudgetary funds, social security institutions, and revolving funds. Its data on the public sector cover the general government as described above and state-owned enterprise.

The MOF's data on revenue and expenditure on the central government are comprehensive. The MOF data on revenue and expenditure of the local government are also comprehensive. Separate datasets disseminated on the MOF website on the central government and the local government, with no consolidated accounts of the two levels of government, however, pose the risk of users misinterpreting that revenue or expenditure might be double-counted in cases where intergovernmental transactions are not consolidated. Consolidated accounts of the general government need to be compiled and disseminated to the public to enhance data accuracy and reliability.

In addition, as noted in 2.1.1., the MOF has started compiling data on the central government in the *GFSM 2001* presentations; however, it has yet to incorporate data on the local government and social security operations to compile data on the general government in the *GFSM 2001* framework⁵ Further, it has yet to disseminate on its website data that it compiles in the *GFSM 2001* presentations and provide such data to Turkstat for use in the compilation of national accounts.

⁵ The MOF has indicated that it is working on refining its data on the local government and that it plans to include data on social security operations at a later date to produce consolidated accounts on the general government in the *GFSM 2001* framework.

The Treasury's data delineating financing ("below the line" items) as related to revenue and expenditure ("above the line" items) are comprehensive. The Treasury also disseminates fiscal data as defined in (previous) IMF programs.

With respect to debt data, the Treasury publishes on a regular basis not only data on debt of the central government, but also that of the public debt. Disaggregated data are available by location of issuance (at home or abroad), maturity, instrument, currency, and key creditors. The Treasury can enhance the scope of its coverage by disseminating an additional dataset on public debt compiled on a residency basis. The Treasury can collaborate this effort with the Central Bank of Turkey (CBT), whose data from banks are key sources for such information.

The SPO data shown in Turkey's annual programs represent the main source of consolidated finance data on the general government and the public sector, which are published.

2.3 Classification/sectorization

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

The PFMCL defines the coverage of the general government. It also authorizes the MOF to develop an institutional list for the general government for statistical compilation purposes to meet accession requirements of the European Union. The list, to be finalized at year end of 2008, is to be used for compiling government finance statistics in 2009.

Following practices of EU member states, Turkey treats social security funds as a separate subsector of the general government and not as part of the central government.

Tax revenues received by the budgetary central government but earmarked for local governments are included in the revenue of the budgetary central government; when transfers are made to the local government, grants are recorded accordingly in the budgetary central government accounts and accounts of the local government. This reflects the fact that the budgetary central government has the discretion of whether to transfer the amount in full or in part.

Expenses are recorded on an accrual basis in accordance with the *GFSM 2001*.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

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

Consistent with *Government Finance Statistics 1986 (GFS 1986)*, debt liabilities are recorded at face value (i.e., the amount to be repaid at the end of the contract), rather than at market values.

2.4.2 Recording is done on an accrual basis.

All central government entities have adopted modified accrual accounting rules since 2006. Such accounting framework is being introduced in the local government and social security institutions and the process has not been completed.

Revenue and expenses (including interest payments) are recorded on an accrual basis, as well as on a 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.

Tax refunds and rebates are correctly classified as (negative) revenue 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.

The MOF's say2000i automated accounting system collects comprehensive budgetary information on the central and the local governments, providing timely source data for the MOF's monthly data on revenue and expenses of the central government and the local government.

The Treasury compiles public sector debt statistics based on its debt management database. Combining information in its own debt database and the MOF's say2000i database, the Treasury compiles financing data for the central government.

Before 2008, the SPO conducted annual survey on the local government covering 905 municipalities (including all municipalities that have population greater than 20,000 and a sample of ones with population fewer than 20,000), all special provincial administrations (SPAs), all utilities and the Ilbank. For 2008, the SPO collects data via the Internet from all municipalities (3205 plus 16 metropolitan areas), all SPAs, all utilities, local administration units, and the Ilbank. The tradition of the SPO collecting data on the local government relates to the fact that Turkstat publishes its surveys on the local government with a two-year lag, and the SPO needs timely data to perform its responsibility for preparing estimates for Turkey's Annual Programs and for contributing to various policy issues.

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

The PFMCL authorizes the MOF in its responsibility to compile general government statistics to align definitions, scope, classifications, valuation methods, and time of recording to international standards. Accordingly, the MOF has started applying the *GFSM2001* framework in compiling its government finance statistics.

Classifications

The MOF has developed a bridge table linking budgetary items to the *GFSM 2001* classifications. The MOF has used the bridge table to derive data on the central government in the *GFSM 2001* presentation and started reporting such data to the IMF for publication in the IMF *Government Finance Statistics Yearbook*, beginning with the data for the year 2006.

Basis for recording

The MOF has introduced the accrual-based recording for compiling its government finance statistics.

The PFMCL authorizes the MOF to establish accounting standards for the general government. The accrual accounting system introduced was developed under an agreement—Programmatic Financial and Public Sector Adjustment Loan—with the World Bank; it follows international public accounting standards.

3.1.3 Source data are timely.

The establishment of the say2000i system has provided a timely and comprehensive data source, since the system gathers information on financial transactions of the general government. The availability of comprehensive and timely data source has facilitated the MOF's compilation and dissemination of monthly data on the budgetary central government and quarterly data on the local government.

3.2 Assessment of source data

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

The main validation of all government finance data is via the benchmarking of preliminary data to audited data for all agencies. No special assessments are made of the relationship between preliminary and final data.

Budget realizations are subject to validation assessments undertaken by the SPO as part of its work in preparing for the Annual Programs.

3.3 *Statistical techniques*

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

Comprehensive information is gathered by the MOF, the Treasury, and the SPO. As noted earlier, for 2008, the SPO's collects data on the local government via the Internet, covering all municipalities, as opposed to its previous method of using sampling techniques to derive estimates for the local government.

With the introduction of accrual recording in compiling government finance statistics, beginning with the budgetary central government data for 2006, the MOF has revised its data on budgetary central government for the years 2000 through 2005 and disseminated them on its website. However, the MOF has not revised data on the local government and social security funds.

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

The MOF's separate presentations on its website of data on the central government and on the local government, unaccompanied by consolidated accounts to take account of intergovernmental transactions, has subjected the data to misinterpretations, including the appearance of double-counting of expenses, when certain expenses appear in both the central government and the local government data. The MOF is working on developing procedures on data adjustments and transformations to reflect properly intergovernmental transactions to produce consolidated accounts of the central government and the local government. It also needs to develop similar procedures to incorporate data on social security operations to derive data on the general government.

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

3.4.1 Intermediate results 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 internally to inform statistical processes (see also 4.3.3).

The SPO routinely reviews the coverage and accuracy of various datasets on government finance; it uses these analyses to inform its statistical processes to compile data on the public sector finance, which appear in Turkey's Annual Programs, Pre-Accession Economic Programs, and Medium-Term Program. The SPO could leverage its expertise in this area to other responsible agencies to strengthen the coverage and accuracy of their datasets.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

Periodicity of government finance statistics follows the SDDS and exceeds it in some areas. Specifically:

- The MOF's data on budgetary central government operations are published monthly. (In addition, Turkey publishes annual data on central government operations.)
- The Treasury's data on central government debt are published monthly, exceeding the SDDS prescription for quarterly data.
- The SPO's data on general government operations are published annually. (Turkey's data go beyond the general government to cover the public sector, including state-owned enterprises.)

4.1.2 Timeliness follows dissemination standards.

Timeliness of government finance statistics follows the Special Data Dissemination Standard (SDDS) and exceeds the SDDS prescriptions in a number of areas. Specifically:

- The MOF's monthly data on budgetary central government operations are published within 15 days after the reference period (exceeding the 30-day lag prescribed in the SDDS). In addition, exceeding the SDDS requirements, its quarterly data on the local government are published within one quarter after the reference period (the SDDS does not require the dissemination of quarterly local government data).

- The Treasury's monthly data on central government debt (both domestic and external⁶) are published within three weeks after the reference period, exceeding the SDDS prescribed quarterly data with a quarterly lag.
- The SPO's annual data on general government operations are published within two-quarters after the reference period.

The Official Statistics Program provides detailed information on the timeliness and periodicity for various datasets, as well as advance release calendars for them.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

Government finance statistics are internally consistent. The SPO makes adjustments to various datasets and supplements with additional information to compile comprehensive consolidated data on the general government and the public sector. The SPO could leverage its expertise in compiling consistent and consolidated data on the public sector finance to the MOF and other responsible agencies through the promotion of their compiling and disseminating consolidated data, in addition to the publication of separate datasets on subsectors of the general government. Such enhancements in data quality would, in turn, lessen the burden on the SPO in gathering additional data and undertaking extensive data reviews and adjustments in the preparation of its Annual Programs.

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 the 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.

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

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

Time series on government finance statistics are consistent over time—the MOF, the Treasury, or the SPO are able to explain all divergences from the expected trend. With the introduction of the *GFSM 2001*, the MOF has produced time series data on an accrual basis on the budgetary central government going back to year 2000. The MOF plans to develop time series data on an accrual basis on the central government; however, it does not plan to develop such data on an accrual basis on the local government.

⁶ The Treasury in its debt data defines domestic debt as debt issued domestically and external debt as debt issued abroad.

4.2.3 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. Turkstat 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 compiled and disseminated on a net basis, excluding interest; however, in banking statistics, domestic debt stock is shown in market prices, produced from the balance sheet of banks.

Fiscal data are not fully reconciled with monetary data on government accounts with the banking system and with balance of payments data (viz., external debt data). Consistency checks among fiscal data, monetary statistics, and balance of payments statistics are seldom undertaken by the MOF and the CBT.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

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

4.3.2 Preliminary and/or revised data are clearly identified.

Preliminary data are not clearly identified, but are notified by a general comment on the publication; an example is “Unless otherwise indicated, data are preliminary when first released.”

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

No time series or analyses of revisions to data, or of the relationship between preliminary and final data, are published.

As noted earlier, the SPO routinely reviews the adequacy of data produced by other agencies and uses such reviews to inform its statistical processes, including the collection of additional data where it deems necessary. The SPO’s reviews of data could be made public to guide users in understanding how such analyses inform statistical processes.

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 disseminated in various datasets and by a number of agencies (the SPO, the Treasury, and the MOF). There is, however, no single publication or central database dedicated to providing an overview of a complete set of government finance statistics; and users need to navigate through a number of separate publications or websites to assemble the full range of such data. Further, linkages among the different datasets are not apparent to users.

As the PFMCL has designated the MOF as the agency for compiling and disseminating government finance statistics, the MOF could develop a central electronic fiscal data dissemination bulletin board on its website to provide users' easy access to various datasets through hyperlinks. The bulletin board could be prefaced with salient features of the various datasets noting differences and linkages; it should also provide guidance for data reconciliations; and responsible agency contacts should also be identified.

In addition, the English version of the MOF website is less comprehensive than its Turkish version. For the Treasury and the SPO, the English and the Turkish versions of their respective websites are equally comprehensive.

5.1.2 *Dissemination media and formats are adequate.*

In addition to posting data on their respective websites, the MOF, the Treasury, and the SPO publish their data in various documents, including the *Public Accounts Monthly Bulletin*, the *Government Gazette*, budget documentations, the SPO's *Monthly Main Economic Indicators and Annual Programs*, and the Treasury's *Public Debt Management Report*.

Government finance statistics in the *GFSM 2001* presentation, a new dataset the MOF has compiled for statistical reporting to the IMF beginning with data for 2006, are not posted on the MOF website; they are published in the IMF *Government Finance Statistics Yearbook*. The MOF has indicated that it plans to post the *GFSM 2001* data on its website in due course.

5.1.3 *Statistics are released on a pre-announced schedule.*

An advance release calendar (a year ahead) that gives precise release dates for key fiscal datasets is disseminated on the Turkstat's website (www.die.gov.tr/turcat/sdds/sdds.htm). The MOF is working on developing additional advance release calendars for the high-frequency *GFSM 2001* data that it plans to compile and report to the IMF.

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

Data on the budgetary central government are released simultaneously to all interested parties in the press release *Central Government Budget Realization*, issued by the MOF.

Central government debt statistics are released simultaneously to all interested parties by the Treasury in its monthly and quarterly press releases on *Outstanding Domestic Debt* and *External Debt Stock*, as well as in its monthly *Public Debt Management Report*.

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

5.1.5 Statistics not routinely disseminated are made available upon request.

Nonpublished (but nonconfidential) sub-aggregates are made available upon request. In addition, a freedom of information act (viz., Information Access Law No. 4982) has been implemented to provide the public their access to unpublished data.

5.2 Metadata accessibility

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

Explanatory notes accompany data published by the MOF, the Treasury, and the SPO. On the MOF website, metadata are more comprehensive on the Turkish version than on the English version.

Summary descriptions of methodology and classification for data covered under the SDDS are available on the IMF's Dissemination Standards Bulletin Board.

However, more detailed metadata are needed to inform policymakers and market participants on major differences among the various datasets. Consistent with 5.1.1.above, there is a need for the publication of a user guide to Turkey's government finance statistics, with clear explanations on the scope, concepts, definitions, classifications, and methodology for individual datasets, as well as on their linkages and differences. Information on ways to reconcile the different datasets would also be useful to users. Such documentation could be posted on the electronic data dissemination bulletin board as envisioned in 5.1.1. above. (See also 1.2.1.)

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

More data and metadata should be made available on the English version of the MOF website.

5.3 *Assistance to users*

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

Information on the contact person for each of the data categories covered under the SDDS, including the person's telephone and facsimile numbers and e-mail address, is posted on the IMF's Dissemination Standards Bulletin Board. Such persons can provide assistance to users of the statistics or guide them to appropriate technical experts for the data. Contact information is also available on other datasets.

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

Detailed lists of their respective datasets are shown on the websites of the MOF, the Treasury, and the SPO.

RECOMMENDATIONS

High priority

- To enhance accuracy and reliability of data, the MOF needs to compile and disseminate consolidated accounts of the general government on a priority basis in the near term. Consolidated data will properly adjust for intergovernmental transfers and other transactions to eliminate the appearance of double-counting of such activities. In light of the SPO's extensive experience in compiling consolidated accounts of the public sector finance, close coordination between the MOF and the SPO will help the MOF to publish such data in the near term.
- To adhere to the international standard on the coverage, the MOF needs to incorporate data on social security institutions to compile and disseminate data on the general government. The coverage of social security institutions is also important because they represent a significant aspect of fiscal operations; the lack of their coverage in the MOF data diminishes the usefulness of such data in reflecting the share of the government sector in the overall economy. Existing data on revenue and expenditure of social security institutions available to the MOF provides the key source data for the coverage of such operations. In building capacity in compiling general government data in the near term and on a priority basis, the MOF could benefit from the extensive experience the SPO has in compiling consolidated accounts on the finance of the general government and the public sector.
- In light of the disparate datasets published by the MOF, the Treasury, and the SPO, a clear mapping of the linkages of the various datasets is needed to guide users navigate through them. Clear explanations on the salient features of the various datasets should accompany the mapping, along with hyperlinks to the data. To enhance data

accessibility, the MOF can establish a fiscal data dissemination bulletin board on its website launching such mapping and hyperlinks. To further enhance data accessibility, the MOF needs to make available on the English version of its website corresponding datasets it posts on the Turkish version.

- To enhance data consistency, the Treasury, in collaboration with the CBT, could compile and disseminate an additional data series on the public sector's external debt based on the residency concept, so that such data can be reconciled with the data on the public sector's liabilities to non-residents, as shown in Turkey's international investment position data compiled by the CBT.

Other

- Since the SPO reviews the adequacy of macroeconomic data produced by various agencies and undertakes to collect additional information where it deems necessary, it could leverage its expertise in data reviews and analyses to inform statistical processes of other data producing agencies.
- The MOF could share with Turkstat the data it compiles in the *GFSM 2001* presentations so that such data could be incorporated in Turkstat's data on national accounts.
- To further assist the users in understanding the differences of the various datasets and in reconciling them, the SPO could publish its experiences in reviewing and analyzing data to inform its statistical processes in compiling consolidated public sector data covering the budgetary central government, extrabudgetary funds, the local government, social security institutions, and state-owned enterprises. Such information would also facilitate users' analysis of the SPO data presented in Turkey's Annual Programs, the Pre-Accession Economic Program, and the Medium-Term Program.

Table 4. Turkey: Data Quality Assessment Framework (July 2003): Summary of Results for Government Finance Statistics
(Compiling Agencies: Ministry of Finance, the Treasury, and the State Planning Organization)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope			X			The MOF has not incorporated data on the local government and those on social security institutions to compile general government data in the <i>GFSM 2001</i> presentations, which the MOF reports to the IMF for publication in the IMF <i>Government Finance Statistics Yearbook</i> .
2.3 Classification/sectorization		X				
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data		X				
3.2 Assessment of source data		X				
3.3 Statistical techniques			X			The MOF is working on developing procedures on data adjustments and transformations to reflect properly intergovernmental transactions to produce consolidated accounts of the central government and the local government; it also needs to develop similar procedures to incorporate data on social security operations to develop data on the general government. .
3.4 Assessment and validation of intermediate data and statistical outputs		X				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
3.5 Revision studies			X			The SPO routinely reviews the coverage and accuracy of various datasets on government finance; it uses these analyses to inform its statistical processes to compile data on the public sector finance, which appear in Turkey's Annual Programs, Pre-Accession Economic Programs, and Medium-Term Program. The SPO could leverage its expertise in this area to other responsible agencies to strengthen the coverage and accuracy of their datasets.
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency			X			Fiscal data and monetary data on government accounts with the banking system are not fully reconciled. Consistency checks with monetary statistics and balance of payments statistics are rarely done.
4.3 Revision policy and practice			X			The SPO' studies and analyses of revisions could be made public to guide users in understanding how such analyses inform statistical processes.
5. Accessibility						
5.1 Data accessibility			X			The MOF's separate presentations on its website of data on the central government and on the local government, unaccompanied by consolidated accounts to take account of intergovernmental transactions, has subjected the data to misinterpretations, including the appearance of double-counting of expenses, when certain expenses appear in both the central government and the local government data. In addition, the English version of the MOF website is less comprehensive than its Turkish version.
5.2 Metadata accessibility			X			There is a need to document linkages of different datasets, noting their salient features and differences (including concepts, scope, classifications, etc.) to guide users in properly interpreting the data and reconciling them. Such documentation could be posted on the websites of the MOF, the Treasury, and the SPO, along with hyperlinks to the various datasets. (See also 1.2.1. above.)
5.3 Assistance to users		X				

V. BALANCE OF PAYMENTS STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

The compilation and dissemination of the balance of payments (BOP) statistics are the responsibility of the Central Bank of the Republic of Turkey (CBRT) and are governed by the terms and conditions of the CBRT Law of January 1970 (Law 1211), as amended by Law 4651 of April 2001. The CBRT Governor is appointed by the Council of Ministers for a five-year term and may be reappointed at the expiration of this term (Article 25). Article 43 of the CBRT 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 BOP, 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. Within the CBRT, the BOP Division of the Statistics Department⁷ is responsible for the compilation and dissemination of BOP and international investment position (IIP) statistics, as well as the data template on international reserves and foreign currency liquidity (reserves template), private sector's long-term external debt, and total short-term external debt.

The Statistics Law of Turkey (Law 5429) of November 2005 reinforces the responsibility of the CBRT for the compilation and dissemination of BOP and the other above mentioned statistics. This responsibility is highlighted in the five-year Official Statistics Program (OSP) created by this Law; which also identifies the frequency and periodicity for data collection and dissemination, main data sources, and the methodological framework.⁸

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

Procedures and working arrangements among agencies for timely provision of data to the CBRT for BOP compilation are adequate. In compiling the BOP, the CBRT draws on its data collection system, mainly based on foreign currency transactions data through resident banks; surveys conducted by the CBRT and Turkstat; foreign trade data provided by Turkstat; and administrative data sources.

⁷ The Statistics Department comprises three divisions: Balance of Payments Division, Money and Banking Division, and Real Sector Division.

⁸ See Official Statistics Program for 2007-2011 (pages 62-63) at <http://www.turkstat.gov.tr/rip/rip.pdf>.

Working arrangements with Turkstat are in place to assure timely and effective flow of data on (i) foreign trade compiled by Turkstat as specified in the Statistics Law, and (ii) surveys on travel and shuttle trade conducted by Turkstat since 2003. Likewise, working arrangements are in place for the Treasury to consolidate and disseminate total external debt data on a quarterly basis. To this end, the Treasury compiles long-term public external debt under the terms of the 1994 Treasury Establishment Law, and the CBRT provides to the Treasury data on private sector's long-term external debt since October 2001 and total short-term external debt.

In implementing the OSP 2007-2011, the CBRT maintains regular meetings with other data producing agencies seeking to avoid duplication of effort and to take into account reporting burden for BOP compilation.

0.1.3 Individual reporters' 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 Banking Regulation and Supervision Agency (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. Furthermore, 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 in connection with their duties.

The Statistics Law of Turkey (Law 5429) reinforces the confidentiality provisions. Article 13 of the Law includes a number of provision such as (i) confidential data can be accessed only by those involved in the production of official statistics only if such access is needed for performing their duties; (ii) data for a particular item is considered confidential if the number of respondents is less than three, or one of two of respondents are dominant even if the number of respondents is three or more; (iii) the confidential data cannot be delivered to any administrative, judiciary, or military authority or person, and can not be used for purposes other than statistics or as an instrument of proof; and (iv) civil servants and other staff in charge of compiling and processing these data are obliged to comply with this rule; even after the related personnel leave their duties and posts. Furthermore, Article 53 establishes that civil servants violating the confidentiality provisions of the Statistics Law shall be punished according to Article 258 of the Turkish Penal Code 5237 and subject to judiciary fines. The "Regulation of Procedures and Principles of Data Confidentiality and Confidential Data Security in Official Statistics" was issued in June 2006.

In line with these provisions, surveys used for compiling BOP statistics indicate that collected information is confidential and only for statistical purposes; only authorized staff of the Statistics Department have access to data of individual banks and individual data from

other respondents before they are aggregated for publication; and 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 authorizes the CBRT to (i) directly request and collect statistical information relating to financial system and other statistical information necessary for the surveillance of developments in the economy and the BOP, from depository corporations, other financial corporations, and persons and (ii) directly request information, balance sheets, and reports of depository corporations, other financial corporations, and persons, and to investigate and supervise the accuracy of these information.

Banks and other financial corporations 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 (Article 43, paragraph 1). 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 CBRT within one month after the end of the reference month.

Article 68 (III.b) of the CBRT Law stipulates penalties for noncompliance with reporting requirements, including fines from 500 to 1,000YTL (equivalent to 330 to US\$670), and may suspend or restrict institutions' operations authorized by the CBRT Law in the event of nonresponse. The Statistics Law also establishes the obligation to submit data for statistical purposes, including legal sanctions and similar fines for breaches of confidentiality.

The response rates have been high; therefore, the CBRT has not enforced penalties. The BOP Division seeks to encourage response by creating respondents' goodwill, answering questions promptly, emphasizing the importance of BOP 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, facilities, computing resources, and financing are commensurate with statistical programs.

The BOP Division is responsible for producing and disseminating BOP statistics (see 0.1.1). The Division is comprised of 23 professionals who are responsible for compiling the BOP, IIP, reserve template, private sector's long-term external debt, and short-term external debt. Given these arrangements, staffing is adequate to perform existing tasks. Nevertheless, increasing in five the number of qualified staff of the BOP Division is of great importance for further expanding the set of supporting surveys and implementing upcoming methodological guidance (*BPM6*) in due course.

The level of professional expertise of the staff is high, and the qualifications of the staff are also adequate. Staff turnover is not high. Twenty staff members are university graduates, and

nine have a Masters degree in economics, some of whom were fully financed by the CBRT. Eight staff members have participated in BOP courses and three staff members in external debt courses organized by the IMF in Washington, D.C. and the Joint Vienna Institute.

The BOP Division is equipped with computers, one for each staff member, which are LAN connected. In general, computer resources are adequate to perform existing tasks. Excel datasheets are the main software used for compiling BOP and IIP statistics. Nevertheless, the CBRT database (DB2) is already being used for compiling private sector's long-term external debt, short-term external loans, and annual inward FDI survey data. The CBRT is working toward transferring the quarterly portfolio investment assets survey and the BOP from Excel files to the CBRT database.

0.2.2 Measures to ensure efficient use of resources are implemented.

In September of each year, the CBRT undertakes a review of its resources in the context of budgetary planning for the next three years.

The Accounting Department conducts a quarterly review to assess the cost-effectiveness in using resources to conduct work undertaken in each unit. Reviews are also conducted by the Human Resources Department to improve the work within each unit. Departments prepare their budgets for the next three years. New technology for data processing and/or data management is always tested by computer and systems analysis experts.

When necessary, the CBRT requests guidance from the Fund and OECD on the methodology and compilation of BOP/ IIP statistics. Country experiences are also taken into consideration.

0.3 Relevance

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

The CBRT closely monitors users' needs by taking into account their questions and requests to the Statistics Department. In line with the Information Access Law of October 2003, data needs of users are monitored through electronic mail services. The Law requires that the public institutions respond to the users queries within 15 days after receiving them. In this regard, both foreign and domestic users may send queries about BOP statistics directly to the CBRT and they generally receive responses within 15 days. In addition, the BOP Division intends to conduct a users' survey among the subscribers to BOP and IIP statistics in the near future.

Staff of the BOP Division participate actively in regional and international meetings and conferences, including (i) OECD meetings, such as the Working Group on International Investment Statistics and the Working Party on International Trade in Goods and Trade in Services Statistics, (ii) the Coordinated Direct Investment Survey (CDIS) seminar organized jointly by the IMF and Eurostat, (iii) meetings on Eurostat BOP Working Party and the Travel Technical Group, (iv) BIS meetings on the locational/consolidated banking statistics

and on the Handbook on Debt Securities Statistics. Occasionally, lectures and press conferences are organized in which outside experts and the media are invited to participate.

0.4 Other quality management

0.4.1 Processes are in place to focus on quality.

The CBRT recognizes that official statistics must have the confidence of users and exercises quality control during data production and dissemination. Validation procedures for assessing the plausibility or reasonableness of reported data are undertaken and reviewed with the reporting institutions to verify for possible misclassifications and miscalculations. All levels of the Statistics Department participate actively in the review of data prior to publication.

Data are checked for misreporting, and the CBRT reverts to the reporting institution when necessary. Staff from the BOP Division visit reporting institutions once or twice a year to review processing for data provision. Training programs in basic methodology and compilation programs are also conducted upon requests from the reporting institutions. For example, a two day workshop was conducted in Istanbul in early 2008, where staff from research departments of about twenty commercial banks participated.

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

The Statistics Department verifies that data reporting practices are consistent with the regulations and that well-defined procedures are in place to ensure quality in the compilation process. Crosschecks are conducted and discrepancies are investigated.

During the first months of 2008, the work of the BOP Division was subject to an internal audit conducted by the CBRT's Internal Audit Department.

For problems in data collection, the reporting institutions are informed and guided by the staff of the Statistics Department. The CBRT uses the media to monitor information on large external debt transactions and large-scale direct investment operations.

The Statistical Council established by the Statistics Law monitors the implementation of the five-year Official Statistics Program and provides advice when needed. The Governor of the CBRT is a member of the Statistical Council. The Council meets at least once a year.

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

The five-year Official Statistics Program, prepared and reviewed annually by Turkstat in consultation with the CBRT, monitors the consistency with international standards, future plans, and advance release calendars.

CBRT management recognizes the tradeoffs among the different dimensions of data quality. Timeliness is regarded as one of the most important dimensions. This is reflected in the

compilation and dissemination of monthly BOP statistics and annual IIP data with monthly IIP indicators being produced since early 2008. To accommodate this in the event of delays in reporting, some data are published as provisional.

Subscribers to BOP and IIP statistics automatically receive these data through links to the CBRT website. The number of subscribers has increased from about 2,000 in 2001 to 3,850 subscribers in November 2008. Improvements of data quality are taken into account in forward planning. Comparing with 2001, considerable data quality improvements were achieved. For example, annual data on inward FDI and quarterly data on portfolio investment assets are collected through surveys conducted by the BOP Division. The CBRT also enhanced the coverage of services through the implementation of surveys.

1. Assurances of integrity

1.1 Professionalism

1.1.1 Statistics are produced 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 the Law under its own responsibility. The terms and conditions under which the BOP 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 notes on the CBRT website and/or in regular quarterly publications. Staff participates regularly in regional and international meetings and conferences related to their technical work responsibilities (see 0.3.1).

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

The choice of source data and statistical techniques for BOP compilation is based solely on statistical considerations made by the CBRT staff.

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

The Statistics Department comments on erroneous interpretation of its statistics if deemed truly significant and seeks to prevent misinterpretation or misuse of 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 laws and regulations under which BOP 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 is available on the CBRT website⁹, and both the Statistics Law of Turkey and the 5-year Official Statistics Program are available on the Turkstat website¹⁰, as well as in hardcopy formats. These documents 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 BOP metadata on the IMF's Dissemination Standards Bulletin Board (DSBB), a limited number of senior CBRT staff have access to data prior to their publication. No one outside the Statistics Department of the CBRT has access to the data before their release to the public.

Article 12 of the Statistics Law establishes that all institutions participating in the OSP shall take measures to ensure easy and equal access to all users and to assure that no person or authority have access to this information before its public release.

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

Statistical products of the CBRT, including BOP statistics, are well identified in the OSP 2007–2011 (see 0.4.3).

BOP publications, such as the monthly *Balance of Payments Statistics* and the quarterly *Balance of Payments Report*, are clearly identified as a CBRT product, acknowledging Turkstat and the Treasury, among other institutions, 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.

In mid-November 2008, the CBRT included a separate section of “*Announcement about future changes*” in the CBRT website to provide users with advance notice of major changes in methodology, source data, and statistical techniques for BOP and IIP data (<http://www.tcmb.gov.tr/odemedenge/odmainengyeni.html>). Previously, the CBRT informed of major changes in methodology and compilation methods of BOP and IIP when implemented.¹¹

⁹ The CBRT Law is available at <http://www.tcmb.gov.tr/yeni/eng/>

¹⁰ The Statistics Law of Turkey is available at <http://www.turkstat.gov.tr/UstMenu.do?metod=tuikKanun> and the Official Statistics Program for 2007-2011 at <http://www.turkstat.gov.tr/rip/rip.pdf>

¹¹ Available at <http://www.tcmb.gov.tr/odemedenge/announcementsBOP.htm>

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 CBRT Staff provides broad ethical guidelines for CBRT staff. It 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 BOP statistics are in broad conformity with the guidelines of the *BPM5*. Resident institutional units are defined in conformity with the *BPM5*; including the residency of offshore entities and enterprises operating in free trade zones, which is attributed to the economy where they are located.¹²

BOP transactions are defined according to the guidelines of the *BPM5*, including (i) the definition of direct investment following the 10 percent ownership rule, (ii) the definition of goods according to the recommended breakdown; and (ii) the recording of financial leasing as loans in the financial account.

Foreign currency deposits held with the CBRT by nonresident Turkish citizens (“Dresdner deposits”) and commercial banks deposits at the CBRT from reserve requirements denominated in foreign currency are treated in line with the requirements of the template on international reserves and foreign currency liquidity (reserve template).

2.2 Scope

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

Turkey’s BOP statistics broadly cover all resident-nonresident transactions according to the *BPM5*; including transactions of free trade zones located in Turkish territory, shuttle trade, reinvested earnings and intercompany lending, portfolio investment assets of the private sector, and trade credit. The CBRT includes in the BOP and IIP statistics the transactions and

¹² See Table 5 on “Progress made by the authorities in implementing the 2001 Data ROSC recommendations on BOP statistics”.

stock data of debt securities, respectively, according to the residency of the instrument holder rather than to the economy where the securities were issued, in accordance with the guidelines of the *BPM5* and the *External Debt Statistics: Guide for Compilers and Users*.¹³

The scope of the following transactions in the BOP could be further strengthened: (i) external deposits of the nonbank private sector, (ii) equity and debt securities external assets, (iii) noncash loans disbursements to the public sector, and (iv) capital transfers. These areas are not considered significant and are being kept under review.

2.3 Classification/sectorization

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

The classification and sectorization of Turkey's BOP/IIP statistics are largely in compliance with the *BPM5* since early 2002. Institutional units are classified in four sectors (monetary authority, general government, banks, and other sectors). The monetary authority corresponds to the CBRT. Other sectors covers nonbank financial corporation, nonfinancial corporations (both public and private), and households. Consequently, government guaranteed external debt transactions are attributed to the institutional sector of the borrower, and public enterprises' claims and liabilities are attributed to other sectors.

Some deviations from the guidelines of *BPM5* include (i) goods for processing and repairs on goods are classified under services on a net basis, rather than as goods¹⁴, (ii) financial derivatives are commingled in portfolio investment; and (iii) general government debt securities issued abroad and held by residents are recorded as an increase in external assets rather than as a decrease in external liabilities. These areas are not considered significant and are being kept under review.

2.4 Basis for recording

2.4.1 Market prices are used to value flows and stocks.

Turkey's BOP statistics are compiled in U.S. dollars. Transactions in other currencies are converted into U.S. dollars following guidelines outlined in the *BPM5*. When appropriate, transactions are valued at the exchange rate prevailing on the day of transaction; otherwise, 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

¹³ Chapter 13 of the *External Debt Guide* provides guidance on the recording of traded securities at <http://www.imf.org/external/pubs/ft/eds/Eng/Guide/index.htm>

¹⁴ Turkstat and Customs are working on the subject. However, this should take in consideration the revised treatment for these items included in the forthcoming *BPM6*.

their original currencies, when available, and then the change in original currency is converted into U.S. dollars at the average exchange rate for the reference period.

Valuation rules used for recording transactions follow the principle of market valuation as recommended by the *BPM5*. Goods are valued on a f.o.b. basis, services are valued at the price paid for the services provided, tradable financial instruments are valued using the price quotation from markets, and nontradable instruments are recorded at nominal value.

Some deviations from the *BPM5* valuation rules include (i) general government's bonds issued abroad are valued at nominal value rather than at market value; nevertheless, adjustments based on the residency of the instrument holder rather than to the economy where the securities were issued are made at market value; and (ii) monetary gold is not valued at current market prices but a fixed price at the end of each quarter for the subsequent three-month period.¹⁵

2.4.2 Recording is done on an accrual basis.

BOP accounting, where possible, is done on an accrual basis. However, some BOP 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, dividends, and profits are recorded on a cash basis. Reinvested earnings on FDI are recorded in the periods when earnings are accrued to the direct investor in proportion to participation in the equity of the enterprise. Services are recorded when paid not when provided. Most transactions in the financial account are recorded when foreign exchange is paid or received. No adjustments are made to approximate accruals; for example, by applying income yields to the value of assets and liabilities using various types of the extrapolation techniques.

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

¹⁵ In accordance with the guidance of the reserve template, the gold reserves should be valued at market value.

3. Accuracy and reliability

3.1 Source data

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

The data sources are broadly sufficient to compile major items of the BOP statistics. Since 2001, the CBRT has made significant progress in developing new/improved surveys to replace/supplement the banks' foreign exchange records for a number of BOP items.

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. Transactions for a number of services, income, and current transfers are not identified and/or classified appropriately in the banks' foreign exchange records. Therefore, surveys are conducted for some of these items to overcome this drawback.

Currently, the primary data sources to compile BOP statistics are:

Box 1. Balance of payments statistics—Main data sources

- **Foreign trade data compiled by Turkstat**
- **Banks' foreign exchange records**
- **Surveys conducted by Turkstat:**¹⁶
 1. Shuttle trade (since 2003)
 2. Departing nonresident visitors—Travel receipts (since 2003)
 3. Arriving citizens—Travel expenditures (since 2003)
- **Surveys conducted by the CBRT:**
 1. Annual inward FDI survey (since 2001)
 2. Quarterly portfolio investment assets survey (since 2006)¹⁷
 3. Surveys on services
 - a. Air transportation—Resident operators (since 2005)
 - b. Air transportation—Nonresident airlines (since 2005)
 - c. Insurance services (since 2006)
 - d. Telecommunication services (since 2003)
 - e. News agencies services (since 2006)
 - f. Catering (since 2005)
 - g. Ground handling (since 2005)
 - h. Construction services in 2008¹⁸
- **Survey conducted by the Treasury**
 1. Annual outward FDI survey in 2008¹⁷
- **Administrative sources:**
 1. FDI data compiled by the Treasury to cross check FDI data from banks' records
 2. Public sector debt stock data provided by the Treasury
 3. Debt securities held by nonresidents provided by custodian banks
 4. Equity securities held by nonresidents provided by Central Registry Agency
 5. Ministry of Labor and Social Security for compensation of employees (debit).
 6. General Directorate of Land Registry and Cadastre for real estate bought by nonresidents (recorded in FDI).

The financial press is closely monitored for information on international transactions, especially for financial account transactions such as FDI and portfolio investment.

Goods: The main source of information for imports c.i.f. and exports f.o.b. is the monthly data on foreign trade flows compiled by Turkstat from customs documents and from major enterprises when customs documents are not available. The CBRT makes coverage and

¹⁶ These surveys were previously conducted by private firms on behalf of the CBRT.

¹⁷ Portfolio investment surveys were conducted annual in 2001-2005.

¹⁸ Results not yet included in BOP/IIP statistics.

classification adjustments to goods trade data compiled by Turkstat to comply with *BPM5* (see 3.3.2).

Transportation: Data for passenger fares, excess baggage, and other transportation receipts and expenditures regarding air transportation are collected through surveys from domestic and foreign airline operators. Turkstat provides freight and freight insurance expenses, disaggregated by the residency of operations and means of transportation, from customs declarations, rather than using a fixed coefficient based on previous periods.

Travel: Data are based on sample quarterly surveys conducted by Turkstat, in cooperation with the Ministry of Culture and Tourism and the CBRT. The surveys cover the average expenditure of nonresident foreign visitors and nonresident Turkish citizens (deemed as “tourism revenues”) and the average expenditure of residents on their trips abroad (deemed as “tourism expenditures”). The expenditures of nonresident Turkish citizens are included in the BOP since 2003. Business and personal travel are identified separately.

Other services: The CBRT surveys on services (identified in Table 2) are the main source data for aircraft operational leasing, telecommunication, insurance and reinsurance other than freight insurance, and news agencies services. For the remaining other services, the banks’ foreign exchange records are the main data source. Currently, the CBRT is conducting a survey on construction services, and a study on embassies and consulates, which results have not yet been included in the BOP statistics.

Income: Income data on FDI, portfolio investment, and other investment are derived from the banks’ foreign exchange records. Data on wages earned by nonresidents working in Turkey for one year or less have been recorded under compensation of employees since 2005. Data on reinvested earnings from FDI in Turkey are obtained from the annual inward FDI survey conducted by the CBRT. Data on reinvested earnings from FDI abroad are not included in BOP/IIP statistics (authorities consider that these figures are not material).

Current transfers: The general government item includes cash grants received by the government through the banks’ foreign exchange records, and payments of Turkish citizens residing abroad to the government in order to be exempted from the compulsory military service. Noncash grants to the government are not regularly recorded in the BOP. In case of natural disasters, data on noncash grants were obtained from the Turkish Red Crescent (as it was the case in 1999). Data on workers’ remittances are derived from banks’ foreign exchange records and comprise the foreign exchange remittances by nonresident Turkish citizens sent through resident banks and converted into domestic currency. Earned premiums and claims received vis-à-vis paid premiums and claims incurred for nonlife insurance are recorded under the credit and debit items in current transfers of other sectors, respectively.

Direct investment: Data on equity capital are obtained from bank's foreign exchange records and data on reinvested earning from the FDI survey (for inward investment). Since January 2003, FDI data include real estate investment transactions of nonresidents, based on records of the General Directorate of Land Registry and Cadastre, which shows the figures of traded real estate with a country breakdown. Intercompany loans from direct investors abroad to the

resident FDI enterprises are included under the other capital component. The Treasury is currently conducted an annual survey on outward FDI, which results have not yet been included in the BOP statistics. Stock data for inward FDI are compiled by the CBRT through an annual survey and stock data for outward FDI are compiled from banks' accounting records for banks and from Treasury's records for the nonbank sector.

Portfolio investment: Data on equity and debt securities are derived from the banks' foreign exchange records and the CBRT, without a separate identification for security assets, but with a breakdown into assets and liabilities and a further breakdown by sectors. Bonds issued abroad by the Treasury are obtained from the CBRT records. Data on domestic debt securities held by nonresidents are derived from stocks data provided by custodian banks on security-by-security basis, and adjusted for foreign exchange and market price changes. Since 2005, data on nonresidents' equity security investments in Turkey are obtained from the Central Registry Agency Inc. of Turkey (CRA). Previously, these data were obtained from the Istanbul Stock Exchange (ISE). In contrast with flow data recorded in the BOP, stock data on portfolio investment assets separately identify equity and debt securities. Since 2006, these data are obtained from end-investors through a quarterly survey conducted by the CBRT; this survey was conducted annually during 2001-2005. This quarterly survey is also used for the CPIS conducted by the IMF.

Financial derivatives: These instruments are not adequately compiled in BOP statistics.

Other investment: Data on loans, currency and deposits, and other assets/liabilities are obtained from banks' foreign exchange records. Data on short-term trade credit for imports and exports are provided by Turkstat, and their payments are estimated by using a moving average method. Data on disbursements and repayments of loans are received from banks in their *Monthly Foreign Exchange Position Report* along with detailed credit information forms. The coverage of public external debt disbursements in the BOP statistics is mainly limited to information on cash drawings provided by banks' foreign exchange records.

Reserve assets: Changes in reserve assets are derived from the CBRT's foreign exchange records. The Monetary and Financial Division of the Statistics Department is responsible for compiling the Central Bank reserves data on a weekly basis. The BOP Division is responsible for the compilation and dissemination of the reserve template on a monthly basis.

In general, data collection based on surveys is adequate. Table 2 below presents information on the surveys currently used to compile BOP and IIP statistics, including the agency that conducts the survey, the year when the survey was first conducted, the periodicity and coverage, the sample size, and the surveys' responses. In general, the response rate is quite high. Currently, there are two additional ongoing surveys, which results have not been yet included in the BOP/IIP statistics: (i) the annual survey on outward FDI conducted by the Treasury and (ii) the quarterly survey on construction service conducted by the CBRT. The coverage of inward FDI surveys may be expanded in order to include information on direct investment-intercompany lending.

Box 2. Surveys for Compiling BOP and IIP Statistics in Turkey

Surveys	Since Year	Periodicity	Detail	Sample size 1/	Response		
					Number	(%)	
						w/o adjust.	adjust. 2/
I. Turkstat							
1 Shuttle trade 3/	2003	Q	M	958	958	100%	
2 Departing nonresident visitors 3/	2003	Q	M	2,115	2,115	100%	
3 Arriving resident citizens 3/	2003	Q	M	48,070	48,070	100%	
II. CBRT							
1 FDI (inward)	2001	A	A	2,576	1,418	55%	90%
2 Portfolio investment assets 4/	2006	Q	Q	1,287	759	59%	83%
3 Air transport - Resident airlines	2005	Q	M	13	9	69%	
4 Air transport - Nonresident airlines	2005	M	M	35	16	46%	90%
5 Insurance service	2006	Q	M	42	39	93%	
6 Telecommunication	2003	M	M	5	5	100%	
7 News agency services	2006	M	M	8	8	100%	
8 Catering	2005	M	M	2	1	50%	
9 Ground handling	2005	M	M	2	2	100%	
10 Construction 5/	2008	Q	Q	137			
III. Treasury							
1 FDI (outward) 5/	2008	A	A				

A = Annual, Q = Quarterly, and M = Monthly.

1/ For Turkstat surveys, sample size corresponds to 2008Q3. The sample size varies due to seasonality.

2/ Considering only largest companies and for portfolio investment excluding nonfinancial enterprises.

3/ These surveys were previously conducted by private enterprises on behalf of the CBRT.

4/ Survey conducted annually by the CBRT for 2001-2005.

5/ Ongoing surveys.

Source: CBRT information provided to the 2008 ROSC mission.

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 of source data are to a large extent in line with *BPM5*. Specific procedures are used to improve the methodological foundation of the information received by the CBRT from various data sources. Notably, the ITRS only provides data on cash basis, although according to *BPM5*, the BOP statistics are to be compiled on an accrual basis.

3.1.3 *Source data are timely.*

Monthly foreign trade statistics are disseminated by Turkstat within four 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 21 days after the end of the reference month. Data from enterprise surveys are also timely. If exceptional delays occur, the CBRT quickly notifies the banks and/or the enterprises responsible for the delay.

3.2 *Assessment of source data*

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

Administrative records of banks' foreign exchange transactions are periodically assessed to identify and overcome, to the extent possible, problems of coverage and misclassification, particularly those related to transactions of services, income, and current transfers. Surveys on travel services and shuttle trade are also assessed periodically. Since 2001, the survey data collection has acquired greater importance.

The accuracy of surveys data is routinely assessed for non response and sample errors. The CBRT confirms high-value transactions with individual respondents through the reporting bank and/or directly for surveys' data. There is 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.

3.3 *Statistical techniques*

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

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. Monthly crosschecks are performed for the database frame for related data, such as private external debt and intercompany debt liabilities. Once all corrections are made, data are consolidated and included in the monthly BOP statistics. In general, the reporting forms are clear, easy to complete, and appropriate for computer processing.

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

The CBRT employs a number of statistical techniques to adjust the source data, including:

- **Imports c.i.f.** are adjusted to f.o.b. basis using information of freight and insurance provide by Turkstat.
- **Shuttle trade:** Since 2003, data on shuttle trade are obtained from quarterly surveys conducted by Turkstat at the border gates. The average expenditure for the products to be sold abroad derived from the survey results are multiplied by the number of foreign visitors who are involved in shuttle trade, which are estimated by using the percentage of foreign visitors who declare that they purchased products in bulk to be sold abroad in the survey for departing nonresident visitors.
- **Freight** credit and debit data are revised based on data provided by Turkstat through the customs declarations since 2003. Previously, freight data were derived from internationally accepted fixed ratios of total export and import values disregarding modes of transportation. Currently, the freight and insurance expenses are disaggregated according to the residency of operators and means of transportation.
- **Travel** revenues are estimated by expanding the average expenditures of visitors departing Turkey by the population of nonresident foreign visitors and nonresident Turkish citizens. For estimating travel expenditures, the average expenditure of residents traveling abroad is expanded by the population of resident Turkish citizens.
- **Trade credit** for exports and imports, are estimated by using a moving average method for repayments, based on customs documents provided by Turkstat.
- **Securities (debt and equity) issued domestically** bought or sold by nonresidents are estimated from positions data obtained from the custodian banks for debt securities and from the CRA for equity securities. Debt securities are provided on a weekly basis for Government Domestic Debt Instruments (GDDI), while equity securities data are provided on a daily basis. Both data provide the nonresidents' holdings on a security-by-security basis. Flows data are calculated from positions by eliminating the price and foreign exchange rate changes.
- **Compensation of employees** is estimated based on the number of nonresidents who were granted working permits for one year of less by the Ministry of Labor and Social Security.

Coverage adjustments are made by the CBRT to account for (i) goods purchased in Turkey by shuttle traders for resale abroad estimated through surveys conducted by Turkstat, and (ii) goods purchased from /sold to nonresidents by enterprises operating in foreign trade zones. Classification adjustments are also made to account for (i) nonmonetary gold (ii) goods procured in ports by carriers, and (iii) freight and freight insurance (see Table 3).

Box 3. Foreign Trade Adjustments
Million of US dollars

	2006	2007	2008 Jan.-Jun.
1. Exports of goods in trade statistics 1/	85,535	107,272	68,874
2. Adjustments (2a)+(2b)+(2c)+(2d) 2/	7,382	7,060	1,749
a. Shuttle Trade (Coverage)	6,409	6,001	2,853
b. Free Trade Zones Net (Coverage)	1,668	2,092	1,249
c. Nonmonetary gold (Classification)	-637	-974	-2,321
d. Goods procured in ports by carriers (Classification)	-59	-59	-31
3. Exports FOB (1)+(2) 2/	<u>92,916</u>	<u>114,331</u>	<u>70,624</u>
<i>Adjustments in exports in percent (2)/(3)</i>	7.9%	6.2%	2.5%
4. Imports of goods in trade statistics 1/	-139,576	-170,063	-105,844
5. Adjustments (5a)+(5b)+(5c)+(5d) 2/	9,491	13,923	6,896
a. Freight and freight insurance (Classification)	6,793	9,960	5,659
b. Free Trade Zones Net (Coverage)	-1,284	-1,362	-1,046
c. Nonmonetary gold (Classification)	3,982	5,325	2,283
6. Imports FOB (4) + (5) 2/	<u>-130,085</u>	<u>-156,140</u>	<u>-98,948</u>
<i>Adjustments in exports in percent (5)/(6)</i>	-7.3%	-8.9%	-7.0%
7. Trade Balance--Turkstat (1)+(4)	-54,041	-62,791	-36,969
8. Trade Balance--CBRT (3)+(6)	-37,168	-41,809	-28,324
9. Difference (7)-(8)	-16,873	-20,982	-8,645
10. Reclassification of freight and insurance	-3,448	-5,576	-3,278
11. Impact current account (2a)+(2b)+(5a)+(5b)+(10)	10,139	11,114	5,437
12. Current account (CBRT) 2/	-31,896	-37,679	-27,381
Memorandum:			
13. Exports (DOTS) 3/	87,484	111,128	
14. Imports (DOTS) 3/	-126,911	-152,889	
15. Trade Balance—DOTS (13)+(14)	<u>-39,427</u>	<u>-41,761</u>	
16. Difference with CBRT data (8)-(15)	2,259	-48	

1/ Source: Turkstat, merchandise trade data.

2/ Source: CBRT, balance of payments data.

3/ Source: Direction of Trade Statistics (DOTS).

Data on reinvested earning for the current year are estimated based on the data obtained from the FDI survey for the previous year until data for the corresponding year are obtained.

3.4 Assessment and validation of intermediate data and statistical outputs

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

Data obtained from banks' foreign exchange records are checked against other independent data sources, including (i) information in the financial press to verify high-value direct investment, external debt, and other transactions; (ii) public external debt stock data provided

by the Treasury; (iii) imports of gold provided by the Istanbul Gold Exchange Market; (iv) banks' balance sheets; and (v) CBRT database for debt and equity securities.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.

The behavior of some variables is crosschecked with related indicators: (i) interest payments and receipts are periodically assessed in relation to corresponding stock data; (ii) discrepancies between merchandise trade and the associated financial flows from the ITRS are reviewed; (iii) data on freight earnings are regularly assessed in relation to the value/volume of the trade flows. In addition, the compilation of annual IIP starting in 2002 has facilitated the reconciliation of balance of payments data with changes in the corresponding stock data collected for external debt and for other elements of the IIP. A regular detailed BOP/IIP reconciliation (in tabular form) could further strengthen validation procedures.

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 BOP statistics and monetary statistics, and between the current and financial account of the BOP.

Data reconciliations are not conducted with foreign trade data reported by Turkey's trading partners to the IMF Direction of Trade Statistics (DOTS) and creditors' data included in the Joint External Debt Hub (JEDH).

3.5 Revision studies

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

Due to strict timetables for the delivery of monthly BOP statistics, revisions are carried out routinely. Preliminary estimates are needed when the periodicity and/or timeliness of some data sources are insufficient or when some reporters exceed deadlines. Monitoring revisions is considered a normal part of the current compilation practice. The results of adjustments made in the statistical processes are considered in compiling data for subsequent periods. When major revisions are made, the results are well documented, including the causes of revision, methods to incorporate new data sources, and estimation of the magnitude of the changes made.

4. Serviceability

4.1 Periodicity and timeliness

4.1.1 Periodicity follows dissemination standards.

The CBRT disseminates monthly BOP data at the CBRT website; thereby, exceeding the quarterly periodicity prescribed by the SDDS for BOP statistics. Turkey also disseminates a range of other external sector statistics with the periodicity prescribed by the SDDS. IIP statistics are disseminated annually by the CBRT; external debt statistics are disseminated quarterly by the Treasury; and merchandise trade and the reserve template data are disseminated monthly by Turkstat and the CBRT, respectively. Data on international reserves are disseminated weekly by the CBRT; thereby, exceeding the monthly periodicity prescribed by the SDDS. In April 2008, the CBRT initiated the dissemination of a monthly IIP indicator with the same disaggregation provided for annual IIP data.¹⁹

4.1.2 Timeliness follows dissemination standards.

The timeliness of the BOP statistics exceeds SDDS requirements. Turkey's monthly BOP statistics are disseminated six weeks after the end of the reference month (rather than three months as prescribed by the SDDS). The timeliness of other external sector data complies or exceeds SDDS requirements, including IIP data (with timelines of two quarters rather than three quarters), and merchandise trade data (with timeliness of one month rather than eight weeks) also exceeds SDDS requirements.

4.2 Consistency

4.2.1 Statistics are consistent within the dataset.

Concepts, definitions, and classifications for producing monthly, quarterly, and annual BOP 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 BOP have been equivalent on average to 0.5 percent of GDP and 1.1 percent of the total goods' exports and imports in the past eight years.

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

Consistent detailed annual BOP 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 announced and explained in the

¹⁹ The monthly IIP indicator provides data users with very high-frequency information on the countries' external assets and liabilities (with a seven-week timeliness). The CBRT considers monthly IIP data as an indicator because relevant information from a number of data sources (including inward FDI, portfolio investment assets, and nonbank deposits abroad) is not available with such frequent periodicity/timeliness.

monthly report *Balance of Payments Developments* and in the quarterly *Balance of Payments Report* posted on the CBRT website

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

BOP and IIP statistics are broadly consistent. Minor differences between BOP and IIP data—mainly due to the recording of equity and debt security assets and general government bonds issued abroad and held by residents—are closely monitored.

BOP and monetary statistics are broadly consistent and regular reconciliation processes are in place, including official reserve assets and banks' foreign assets and liabilities data.

The CBRT, as the financial agent of the Treasury, has comprehensive data on general government external debt operations and through banks' foreign record obtains data for public sector enterprises. Nevertheless, data on noncash disbursements of government loans are not fully covered. Regarding national accounts statistics, the CBRT regularly provides BOP data to Turkstat for the compilation of national accounts. There are limited regular data reconciliation exercises between BOP and GFS (disseminated by the Treasury) and national accounts statistics (disseminated by Turkstat).

The total external debt data disseminated by the Treasury are reconcilable with the correspondent external debt items of the IIP data disseminated by the CBRT. The CBRT follows the residency criteria in line with *BPM5* and the *External Debt Guide*, while the Treasury records general government debt securities based on the place of issuance (Table 4). Consequently, for end-2007, Turkey's total external debt data based on residency amounts to US\$ 264.7 billion and to US\$ 247.1 billion if based on place of issuance. The difference (US\$ 17.7 billion) corresponds to government debt securities domestically issued but held by nonresidents (US\$ 32.2 billion) minus government debt securities issued abroad and held by residents (US\$ 14.5 billion).

Box 4: Turkey—Total External Debt Position
Million of US dollars

	2006	2007	June 08
1. According to Treasury (place of issuance) 1/	205,156	247,120	284,403
2. According to the CBRT (residency) 2/	219,366	264,712	300,560
3. Difference (CBRT-Treasury) (2-1)	14,210	17,592	16,157
a. Due to secondary market transactions (market value)	14,247	17,684	15,773
b. Due to higher periodicity/timelines in IIP data	-37	-93	384
<i>Additional total external debt (in%)</i>	6.5%	6.7%	5.2%

Table 4a: External Debt - General Government - Bonds

	2006	2007	June 08
4. Treasury data 1/	36,347	38,744	39,203
5. CBRT adjustments	14,247	17,684	15,773
a. Issued abroad but held by residents 3/	-12,474	-14,482	-13,714
b. Issued domestically but held by nonresidents 4/	26,721	32,166	29,487
6. CBRT data 4/	50,594	56,428	54,976
<i>Additional general government external debt (in %)</i>	39.2%	45.6%	40.2%

1/ Disseminated at the Treasury website, linked to the NSDP, and reported to the World Bank.

2/ Data included in the IIP posted at the CBRT website, linked to the NSDP, and reported to STA.

3/ See Table 4b below. 4/ See table 4c below.

Memorandum item:

1. Bonds issued abroad held by resident/bonds issued abroad	34.3%	37.4%	35.0%
2. Domestic bonds held by nonresident/total domestic bonds	13.8%	13.3%	12.8%

Table 4b. Government Bonds Issued Abroad

	2006	2007	June 08
1. Total issued abroad 1/	36,347	38,744	39,203
2. Held by nonresidents	23,873	24,262	25,489
3. Held by residents 2/ 3/	12,474	14,482	13,714
<i>In percent (3)/(1)</i>	34.3%	37.4%	35.0%

1/ Recorded as government's external debt by Treasury.

2/ Excluded from government's external debt in IIP statistics (compiled by the CBRT-market value).

3/ Data disseminated at the CBRT website (IIP dataset, Table 10).

Table 4c. Government Domestic Debt Instruments (GDDI) Held by Nonresidents 1/

	2006	2007	June 08
1. Banks	na.	16,762	16,630
Other banks	na.	14,595	12,182
Branches abroad	na.	2,167	4,448
2. Other financial sector	na.	14,904	11,424
3. Manufacturing, trade, and services	na.	205	1,079
4. Households	na.	295	354
Total held by nonresidents	26721	32,166	29,487
<i>In percent (I)/(II)</i>	13.8%	13.3%	12.8%

1/ Data disseminated at the CBRT website (IIP dataset, Table 5).

Memorandum

Total GDDI Stock (Million of TL) - Market Value	273,489	280,658	282,412
Total GDDI Stock (Million of USD)	193,538	240,970	230,785

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule.

In mid-November 2008, the CBRT publicized its revision policy for BOP and IIP data at the CBRT website (<http://www.tcmb.gov.tr/odemedenge/odmainengyeni.html>). When disseminating the current month data, BOP statistics for the current year and previous year are revised. Also, at the end of the current year, previous five years' BOP data are subject to revision. Except for this general rule, when large-scale revision is needed in any data that compose the BOP statistics, previous years' statistics would be revised by informing the public at large. The revision policy for IIP data has also been recently publicized by the CBRT (<http://www.tcmb.gov.tr/odemedenge/odmainengyeni.html>).

4.3.2 Preliminary and/or revised data are clearly identified.

Preliminary data are identified in BOP data releases; however, better identification is needed when data are revised. The revised data are disseminated with the same level of detail as previously published for the preliminary data.

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

When major revisions to BOP statistics are made, the revisions are announced on the CBRT website. For example, in early 2004, revisions included (i) changes in the recording of travel revenues and workers remittances due to the inclusion of survey data on expenditures made by Turkish citizens residing abroad with the corresponding adjustment in workers' remittances; and (ii) the estimation of freight revenues and expenditures due to the identification of the residency of the operator and means of transportation. A brief document explaining these revisions and identifying their impact in the current account of the BOP and in their corresponding components was posted on the CBRT 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 BOP statistics are published according to the standard components of the *BPM5*, and with time series. Data are published with various levels of detail, and presented in a clear manner, with charts and tables to facilitate analysis.

BOP data are disseminated on the CBRT website through the monthly report on *Balance of Payment Developments*, which includes 37 predefined Excel tables. The *CBRT Quarterly Bulletin* includes time series data for BOP statistics (monthly data for the current and previous years and annual data for the previous 11 years) with a detailed breakdown of the BOP standard components.

Analyses of current period developments are included in the monthly report *Balance of Payments Developments* and in the annual *International Investment Position Report* prepared by the Statistics Department, and in the quarterly *Balance of Payments Report*, prepared by the CBRT Research Department.

5.1.2 Dissemination media and format are adequate.

The CBRT prepares monthly BOP data releases that facilitate re-dissemination in the media. Detailed and summary monthly data on the major components of the balance of payment are available, in both Turkish and English

Current statistics and longer time data series can be accessed through the CBRT Electronic Data Delivery System (EDDS), which is an electronic database with a very powerful query facility.

5.1.3 Statistics are released on a preannounced schedule.

An Advance Release Calendar (ARC) for the next 12 months is disseminated on the CBRT website and on Turkstat website. The ARC is updated once a year in September.

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

BOP data are released simultaneously to all interested parties by posting them on the CBRT website (<http://www.tcmb.gov.tr/odemedenge/odmainengyeni.html>). The data available on the website are monthly and cumulative. The statistics are released punctually, that is according to the preannounced schedule.

5.1.5 Statistics not routinely disseminated 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 of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated.

The conceptual framework and compilation practice for balance of payment statistics in Turkey are presented in the document *Balance of Payments Methodology and Compilation Practice in Turkey* available to the public in Turkish and English on the CBRT website (<http://www.tcmb.gov.tr/odemedenge/odmainengyeni.html>). The document provides (i) a detailed explanation of relevant concepts, definitions, and recording principles—including examples—for adequate recording of transactions in the BOP; and (ii) a description of the main data sources and compilation practices for the main BOP components. The CBRT

disseminates a document for the compilation of IIP statistics, but this document is less comprehensive than the BOP document.

Turkey's BOP and IIP metadata are also posted on the IMF's Dissemination Standards Bulletin Board (DSBB) Metadata on BOP and IIP statistics are updated regularly.

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

Explanatory notes on methodology are included in the BOP and IIP publications prepared by the Statistics Department. More specialized information notes have been prepared and made public, particularly when significant changes in methodology and compilation practices have occurred.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized.

In line with the Information Act of 2005, the CBRT provides prompt and knowledgeable service and support to users of BOP statistics. In mid-November 2008, the CBRT included in the CBRT website a contact point (e-mail, telephone, and address) for users of BOP and IIP statistics (<http://www.tcmb.gov.tr/odemedenge/odmainengyeni.html>).

A contact point for IIP statistics has also been included in the CBRT website in mid-November 2008. Contact persons, address, telephones, facsimiles, and e-mails are also identified for BOP and IIP statistics on the IMF's DSBB.

5.3.2 Catalogs 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 BOP statistics, including research papers (only in Turkish) written by staff of the BOP Division, that can be obtained free of charge. All dissemination formats are also identified on the IMF's DSBB.

RECOMMENDATIONS

High priority

- Improve the coverage of noncash disbursements for government loans and nonbank external deposit assets; the recording of bonds issued abroad held by residents, financial derivatives, and equity/debt security assets; and further develop/improve surveys on FDI (quarterly) and services.
- Extend market valuation to all tradable debt instruments, and record on an accrual basis investment income in the BOP and external debt in the IIP.

- Compile regularly a detailed BOP/IIP reconciliation table and publish a summary reconciliation table in 2009.
- Allocate more staff resources to compilation of BOP and IIP for further expanding the set of supporting surveys and implementing the upcoming *BPM6* in due course.

Other

- Disseminate quarterly IIP data (as encouraged by SDDS) and comprehensive IIP metadata.
- Assess regularly the consistency of BOP/IIP statistics, including with data from trading partners (DOTS) and creditors' data (JEDH).

Box 5. Progress in Implementing the 2001 ROSC Recommendations on BOP Statistics

Recommendations (Volume I)	Implementation	Key achievements / comments
1. Compile and disseminate monthly BOP and annual IIP data according to <i>BPM5</i> presentation.	Fully	Implemented in 2002. The CBRT is also publishing IIP monthly indicators in line with <i>BPM5</i> since early 2008.
2. Provide advance notice of major changes in methodology, source data, and statistical techniques.	Fully	Since 2002, the CBRT website includes “ <i>Announcements about methodological changes</i> ” identifying major changes in BOP compilation when implemented. Since mid-November 2008, the CBRT website also includes “ <i>Advance notice</i> ”.
3. Disseminate the reserves data template including (a) deposits held with the CBRT by nonresident Turkish citizens (Dresdner deposits) with remaining maturity up to one year 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.	Fully	Implemented in 2002.
4. Conduct surveys to supplement available data based on banks’ foreign exchange records.	Fully	Several surveys have been developed and/or improved to supplement banks’ foreign exchange records (see Table 1). New and/or more frequent surveys could be conducted subject to staff availability.
5. Define goods according to the breakdown recommended by <i>BPM5</i> .	Fully	Implemented in 2002. Goods for processing and repairs of goods are presented as net figures under services.
6. Improve source data and estimation techniques to compile:		
a. Transactions of free trade zones	Fully	In line with <i>BPM5</i> , goods’ transactions of free trade zones with other residents are excluded based on information compiled by Turkstat since early 2008.
b. Goods procured at ports	Fully	Data obtained from direct reporting to the CBRT since 2003.
c. Financial derivatives	None	Partially included as portfolio investment. Work to be initiated in 2009.
d. Income transactions on accrual basis	None	Work to be initiated in 2009.
e. The c.i.f./f.o.b. factors for valuing imports.	Fully	Data compiled monthly by Turkstat based on import documents rather than CBRT estimates based on a fixed coefficient.

Recommendations (Volume I)	Implementation	Key achievements / comments
7. Progress in other related issues ²⁰		
a. Define direct investment according to the 10 percent ownership rule.	Fully	Implemented in 2004.
b. Record the financing of goods included in imports' data subject to financial leasing as loans.	Fully	Implemented in May 2007.
c. Monetary gold is valued at market price in the reserve template rather than at a fixed price since end-2000.	Fully	Implemented in 2002.
d. Record insurance/reinsurance in services and current transfers, as appropriate	Fully	Implemented in early 2008.
e. Estimate compensation of employees (debit)	Fully	Implemented in 2005.
f. Record imports in the form of financial leasing transactions	Fully	Implemented in early 2007
g. Classify transit trade as "other trade related services"	Fully	Implemented in 2002, with adjustments back to 1992 data.
h. Record in travel the expenditures of nonresident Turkish citizens.	Fully	Implemented in 2003, through quarterly travel surveys.
i. Record reinvestment earnings for direct investment.	Fully	Implemented for inward FDI in 2003, through estimates based on FDI survey.
j. Record domestic debt securities held by nonresidents	Fully	Implemented in 2001, through estimates based on stock data provided by custodian banks and adjusted for foreign exchange changes and market valuation.
k. Record equity securities issued by residents held by nonresidents	Fully	Since 2005, data obtained from the CRA; and from the ISE for 2001-2004.
l. Record real estate transactions of nonresidents in Turkey	Fully	Since 2003, data are recoded under direct investment (liability).
m. Include loans extended between direct investment enterprises in FDI.	Fully	Since 2002, data was reclassified from other investment to direct investment.
n. Record debt securities in the IIP based on the residency of the holder	Fully	General government securities issued abroad and held by residents are excluded from external debt, and domestic general government securities held by residents are included in external debt.

Source: CBRT, Statistics Department.

²⁰ Recommendations included in the Detailed Assessment (2001 ROSC, Volume III).

Table 5. Turkey: Data Quality Assessment Framework (July 2003): Summary of Results for Balance of Payments Statistics
(Compiling Agency: Central Bank of the Republic of Turkey)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization		X				
2.4 Basis for recording			X			Most items, incl. investment income, compiled on cash basis.
3. Accuracy and reliability						
3.1 Source data		X				
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of source data		X				
3.5 Assessment and validation of intermediate data and statistical outputs		X				
3.6 Revision studies		X				
4. Serviceability						
4.1 Periodicity and timeliness		X				
4.2 Consistency			X			No regular data reconciliation with GFS/national accounts.
4.3 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

VI. MONETARY STATISTICS

0. Prerequisites of quality

0.1 *Legal and institutional environment*

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

Monetary statistics are collected, compiled, and disseminated by the Statistics Department (SD) of the Central Bank of the Republic of Turkey (CBRT) under the terms and conditions set out in the 1970 CBRT Law No. 1211 (amended on April 25, 2001 by Law No. 4651). The Law can be accessed at <http://www.tcmb.gov.tr/yeni/banka/law.html>. Article 4 (II.g) of the Law gives the CBRT the responsibility to monitor financial markets, request necessary information, and gather statistical information from banks and other financial institutions, as well as from organizations authorized to regulate and supervise these institutions. Article 43 of the Law authorizes the CBRT to (i) directly request and collect all statistical information relating to the financial system and other statistical information necessary for the surveillance of developments in the economy and the balance of payments, from banks, other financial institutions, and persons, (ii) directly request information, balance sheets, and reports of banks, other financial institutions, and persons, as well as to investigate and supervise the accuracy of this information, and (iii) publish statistical information.

The CBRT's responsibility for compiling and disseminating monetary statistics is reinforced by the Statistical Law No. 5429 of November 10, 2005. The Law monitors the implementation and developments of official statistics under the supervision of Turkstat. The 5-year Official Statistical Program prepared in the context of the Statistical Law defines monetary statistics as an official statistics that falls under the responsibility of the CBRT. The Official Statistical Program also monitors the consistency with international standards, future plans, and advance release calendar.

The Monetary and Financial Data Division (MFDD) in the SD is responsible for research on the statistical methodology, data collection, verification, processing, compilation, and dissemination of balance of payments and monetary and financial statistics, and maintaining harmonization with international standards and the Official Statistical Program. The report forms for collecting monetary data are part of the "Banks' Supervisory Reporting Package" developed by the Banking Regulation and Supervision Agency (BRSA). All report forms are developed based on the Uniform Chart of Accounts for Banks (UCA). For compiling monetary statistics, the trial balance form "MZ600A" and two additional forms (ST400A and VK100A) are collected from banks directly and verified by the MFDD. Source data for MMFs issuing "Type B Liquid Funds" are obtained from the Capital Market Board's website (www.spk.gov.tr). CBRT data are obtained from the CBRT's Accounting Department.

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

The CBRT is solely responsible for compiling and disseminating monetary statistics. As mentioned earlier, source data are collected from the “Supervisory Reporting Package,” which is developed both for supervisory and statistical purposes. Although the report forms for compiling monetary statistics are collected directly by the MFDD from banks, the CBRT collaborates with the BRSA when there is a need to change the report forms and/or the accompanying instructions.

In preparing and disseminating data with regard to the Special Data Dissemination Standard (SDDS), the Turkstat, the State Planning Organization, and the Treasury are also involved. Meetings are held between the various agencies when necessary.

Within the CBRT, there are adequate arrangements in place to ensure the smooth flow of information between various departments—Accounting, Markets, Banking and Financial Institutions, and the SD. Information has been provided on a timely basis to the MFDD, which is responsible for collecting, compiling, and disseminating monetary statistics.

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

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

The confidentiality of individual reporters’ data is established in the CBRT Law, the Statistics Law, and in the Official Statistical Program. 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 the statistical information shall not be used for purposes other than statistics and shall not be considered as evidence. The confidentiality of individual reporters’ data is reinforced by Article 13 of the Statistics Law. In addition, Section 3 in Chapter 1 of the 5-year Official Statistical Program requires that the institutions and organizations producing official statistics perform their duties in accordance with, among others, statistical confidentiality.

Article 35 of the CBRT Law obliges the CBRT staff 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. CBRT staff 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 SD 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. Computers are password protected.

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

The CBRT's legal authority to collect the source data for compiling monetary statistics emanates from the 1970 CBRT Law. As mentioned earlier, the authority for the data collection is provided in Article 43. According to this Article, the persons that are requested to provide statistical information are obliged to submit this information accurately within the period and in the forms to be determined by the CBRT. Also, the CBRT is 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 its instructions and guidelines of November 16, 2007 that the monthly report forms are required to be submitted to the CBRT within 23 business days after the end of the reference month.

According to Article 68 (III.b) of the CBRT Law, a failure to furnish the documents and information described in the fourth paragraph of Article 43 accurately in the forms and period stipulated is punishable by a fine. This sanction is reinforced by the Statistics Law (Article 54). In practice, there are no notable problems in collecting data from banks and other financial institutions. Normally, the reporting banks contact the SD if they need technical support to complete the report forms.

The Banking Association of Turkey used to request monetary data in specific detailed formats and the MFDD provided the data in the formats as requested. This proves that banks understand the importance of the monetary statistics, hence it helps enhance the data reporting by banks. Since then, the data in these detailed formats are also published in the CBRT's Weekly Press Bulletin.

0.2 Resources

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

Staff resources for compiling monetary statistics are adequate to perform the required tasks. The MFDD has a total of 24 staff, 10 of whom are professionals exclusively devoted to the compilation of monetary statistics and 11 are responsible for checking the data and maintaining the smooth flow of report forms. Three professionals focus on statistical concepts and methodology and the improvement of coverage and accuracy of monetary data. Since 2001, 7 CBRT staff attended IMF training courses on monetary statistics—4 attended courses in Washington, D.C. and 3 at Joint-Vienna Institute. All these trained staff have been involved in the work on monetary statistics in the MFDD.

Employment in the SD is competitive. Most of the staff have university degrees in economics and 6 staff have postgraduate degrees in economics and/or finance from overseas

universities. Besides on-the-job training, staff are given the opportunity to participate in training courses conducted by international organizations, such as the IMF, Bank for International Settlements, Organization for Economic Cooperation and Development (OECD), Eurostat, and European Central Bank (ECB) as well as in seminars offered by other central banks. Staff turnover is low. 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 (EDTS), 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.

Funding for the work on monetary statistics is included in the overall budget of the CBRT and is not separately identified. In general, this funding has been broadly adequate to perform the required tasks. The CBRT's budget is prepared and executed on an annual basis.

0.2.2 Measures to ensure efficient use of resources are implemented

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 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 (HRD) in order to improve the work within each unit. New technology for data processing and dissemination is always tested by computer and system analysis experts.

The SD management holds meetings with 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. A project has been in place to measure the efficiency of the staff and verify their job descriptions. Normally, staff performance is reviewed once a year based on the work that they have carried out. The immediate supervisor evaluates each staff's performance and submits this evaluation to the HRD. Job descriptions for each staff ranking and for each work are defined by the HRD and activities performed under each classification are reported by the SD to the HRD monthly. Training needs of the compiling staff are projected and submitted annually to the HRD. Training needs are always recognized and staff are provided opportunities to attend training courses whenever available. Currently, the staff's knowledge of the new methodology is considered quite adequate for compiling the monetary statistics based on the methodology set out in the IMF's *Monetary and Financial Statistics Manual (MFSM)*.

0.3 *Relevance*

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

The CBRT invites user comments and questions on the relevance and usefulness of statistics via its website and evaluates the reasonable comments for data availability and cost-benefit analysis, and may update or add new data series. Also in line with the Information Access Law approved by the parliament on October 9, 2003, data needs of users are monitored through electronic mail services. The Law requires that the public institutions respond to the users' queries within 15 days after receiving them. In this regard, both foreign and domestic users can send queries about monetary statistics directly to the MFDD or the CBRT's Public Relations Department and they will receive responses within 15 days. The MFDD's staff have participated in meetings and seminars on matters relating to statistics organized by international organizations to keep abreast of new developments in the area of monetary statistics so as to assess the compliance of their practice with the international standards.

0.4 *Other quality management*

0.4.1 Processes are in place to focus on quality

The Statistical Council established by the Statistical Law under the supervision of Turkstat monitors the implementation of the 5-year Official Statistical Program, which aims to promote, among others, the quality of official statistics. The governor of the CBRT is a member of the Council. The Council meets at least once a year.

The CBRT is fully aware of the importance of having timely, high-quality statistics for accurately analyzing monetary conditions as well as for formulating and implementing monetary policy. The CBRT is sensitive to all dimensions of data quality, as evidenced by Turkey's early subscription to the SDDS.²¹ The CBRT exercises quality control at every stage of data collection, production, and dissemination. The staff responsibility for the quality of their respective work is made clear to each staff. This contributes to ensuring the general data quality of the monetary statistics. Also, the importance of data quality is explained during new staff training.

All levels of the SD participate actively in the review of data during the processing and prior to publication. The source data submitted by the reporting institutions to the MFDD are crosschecked for accuracy, and any discrepancies are investigated. Data reporting practices are set by the MFDD in line with the sector and asset classification in the UCA as well as with international standards. Validation procedures for assessing the plausibility or reasonableness of reported data are undertaken visually on a bank-by-bank basis. The MFDD consults with the reporting institutions to verify the data for possible misclassifications. An external auditing company audits the financial statements of the CBRT.

²¹ Turkey became a SDDS subscriber on August 8, 1996.

To ensure that the data quality meets the users' need, the MFDD also monitors developments and changes in financial markets, and improves the methodological soundness of the data taking into account new initiatives and developments in the financial system. MFDD staff participate regularly in OECD's Financial Statistics Working Group as a member as well as in Eurostat's Working Party on Financial Accounts as an observer to keep a breast of the latest developments in the statistical issues and methodologies.

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

The MFDD has in place the established procedures for quality control of monetary statistics. The MFDD, in collaboration with the BRSA, routinely verifies that data reporting practices, followed by the other depository corporations (ODCs), are consistent with the established guidelines and in line with the sector and asset classification in the UCA. Normally, the MFDD reviews the data submissions and informally contacts the reporting institutions in case of errors and/or nonreceipt of data. Depending on the gravity of the situation, a written communication might be sent to the reporting institution.

No formal surveys of users are undertaken; however, users can contact the MFDD, for instance through its website and phone calls, and responses will be provided to all requests and questions within 15 days. There is no other body outside the CBRT that provides guidance on the quality of monetary statistics, and on strategies for improving data production. However, staff's participation in various training courses has strengthened their capacity, which has contributed to the improvement of the data quality.

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

The SD has established a working group that monitors developments and changes in financial markets, and works closely on improving the methodological soundness of the data taking into account new initiatives and developments in the financial system.

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, in particular weekly data may be published as provisional. The CBRT also takes into account users' comments on the relevance and usefulness of the monetary statistics provided via its website.

The Official Statistical Program is prepared by Turkstat in consultation with the CBRT with regard to monetary and financial statistics and balance of payments statistics. The Program monitors the consistency with the international standards, future plan and advance release calendar.

1. Assurances of integrity

1.1 Professionalism

1.1.1 *Statistics are produced on an impartial basis*

The 1970 CBRT Law provides for the independence of the CBRT in performing its functions. According to Article 1, the CBRT is established in the form of a joint stock company with the exclusive privilege of issuing banknotes in Turkey and is vested with the powers and duties set forth in this Law. Article 4 (III.c) 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. The principle of impartiality is reinforced by the Statistics Law (Article 4) as well as the Official Statistical Program.

Articles 25 of the CBRT Law stipulates that the CBRT's governor is appointed for a term of five years by a decree of the Council of Ministers; the appointment may be renewed at the expiration of this term. As regards data dissemination, Article 43 gives the CBRT the authority to publish the statistical information that it deems necessary. As regards the CBRT's accounts, Article 63 provides that the CBRT shall issue a bulletin announcing a brief statement of accounts as of the end of each week and shall also publish it in the Official Gazette. In practice, these provisions appear to be sufficient to support the statistical work of the CBRT, which is found to follow strict technical criteria and to be free of interference from other agencies.

Professional skills are a prerequisite for the hiring of personnel. Technical expertise, educational background, experience, and knowledge of monetary themes are a prerequisite for employment. Staff promotion is based on professional competence that is determined in the context of the annual staff performance review mentioned earlier. Also, professionalism is promoted by encouraging staff involved in compiling monetary statistics to participate in training courses, conferences, and meetings with other professional compilers (e.g., the Turkstat), other central banks, and international organizations. Since 2001, 7 CBRT staff attended IMF training courses on monetary statistics and all have been involved in compiling monetary statistics in the MFDD.

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

The choice of source data is based exclusively on statistical considerations. The source data meet the statistical requirements for decision-making purposes and for publication. Data sources, methods, and definitions are based solely upon methodological considerations in line with the *MFSD* and the *European System of Accounts 1995 (1995 ESA)*.

The principal sources used in compiling monetary statistics are the monthly accounting records of the CBRT and the monthly report forms for banks that are part of the "Supervisory Reporting Package." Source data for "Type B Liquid Funds" MMFs are obtained from the

Capital Market Board's website. These source data are broadly adequate for compiling the monetary statistics based on the *MFSM* methodology.

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

The SD monitors the information published by the press and others that relates to the monetary statistics on a regular basis. It comments on erroneous interpretation of its statistics if deemed truly significant and seeks to prevent misinterpretation or misuse of statistics by providing explanatory notes in its publications, website, and in press releases. However, so far there have been very few occasions where the SD has had to comment on erroneous interpretations of its statistics. The footnotes provided under the statistical tables contain some information about the changes in the compilation methodology, which is useful to data users, thus contributing to preventing erroneous interpretations.

1.2 Transparency

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

The CBRT Law, which constitutes the base for the compilation and dissemination of monetary statistics is available in Turkish and English on the CBRT website. A data dissemination calendar is posted on the CBRT's website at <http://www.tcmb.gov.tr/yeni/veriyay/takvimeng.html> as well as on Turkstat's webpage in the context of the 5-year Official Statistical Program. An advance release calendar for SDDS data categories are also disseminated at Turkstat's website at <http://www.turkstat.gov.tr/arastirmaveprojeler/turcat/body/sdds.htm>. The notice to this effect is also provided in the CBRT's *Quarterly Bulletin*.

The CBRT's statistical publications as well as website provide address and telephone numbers of the respective CBRT department, from which additional information can be obtained.

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

No officials outside the CBRT have access to monetary data prior to their release to the public.

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

The SD is identified as the source of the monetary statistics published in the CBRT's *Quarterly Bulletin* and in the monthly "Money and Banking Statistics" electronic publication. The CBRT requests attribution when its statistics are used or reproduced.

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

Major changes in methodology are announced in the "Announcement" section of the CBRT's website at the time the changes are introduced. A notice about the changes is also disseminated in the *Weekly Press Bulletin* and also at the Electronic Data Delivery System (EDDS) section of the CBRT's website under "What's New." In addition, "Announcements on Methodological Changes" are disseminated through the website under Money and Banking Statistics in the publications section. If changes are minor, footnotes or explanatory notes are provided in the relevant table or section of the *Quarterly Bulletin* and the monthly *Money and Banking Statistics* electronic publication. 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 one-week training program about the fundamental duties and powers of the CBRT and each department. New staff members are informed about the guidelines for staff behavior, including cases that lead to disciplinary actions ranging from warning to dismissal. The guidelines regarding secrecy and responsibility for staff are also provided in the CBRT Law (Article 35).

2. **Methodological soundness**

Methodological soundness is assessed against the principles stated in the *MFSM*.

2.1 *Concepts and definitions*

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

The concepts and definitions used by the CBRT in the compilation of monetary statistics are broadly based on the *MFSM* as well as the *1995 ESA*. This represents significant progress compared with the findings of the 2001 data ROSC, which found that the monetary statistics were compiled, in general, based on the IMF's *Draft Guide to Money and Banking Statistics in International Financial Statistics* (December 1984).

Three measures of money (M1, M2, M3) are calculated and used by the CBRT for policy purposes.²² M1 consists of currency in circulation and demand deposits in domestic and

²² These measures of broad money were adopted in December 2005. Major changes in relation to the old definitions are as follows (i) deposit liabilities of PBs and IDBs, and "Type B Liquid Funds" issued by MMFs are added, (ii) interbank liabilities are excluded, (iii) residents' foreign exchange deposits which were previously included in M2Y are classified under M1 or M2 based on their types, (iv) central governments'

(continued)

foreign currencies of resident other financial corporations, public nonfinancial corporations, and private sector with the CBRT and ODCs. M2 equals M1 plus time deposits in domestic and foreign currencies of resident other financial corporations, public nonfinancial corporations, and private sector. M3 equals M2 plus funds received from Repo transactions that the DCs conduct with resident other financial corporations, public nonfinancial corporations, and private sector, plus “Type B Liquid Funds” issued by MMFs.

The ODCs defined by the CBRT include DMBs,²³ investment and development banks (IDBs), participation banks (PBs), and MMFs, which issue “Type B Liquid Funds” with a residual maturity of less than 90 days and can be liquidated at any time without fees. All these financial institutions issue liabilities that are included in M3; hence the classification of these institutions as ODCs is in line with the *MFSM*.

The CBRT compiles and disseminates the monetary survey, which is the consolidation of the sectoral balance sheets (SBS)²⁴ for the monetary authorities and the ODCs. The SBS for the monetary authorities covers the CBRT’s accounts and two accounts rerouted from the Treasury—coin issue and IMF loans to the Treasury. As coin issue is not substantial and financial transactions with IMF should be normally included in the SBS of the central bank, the SBS of the monetary authorities is similar in scope to the SBS for the central bank as defined in the *MFSM*. The CBRT compiles and disseminates the SBS for the DMBs, IDBs, PBs, and “Type B Liquid Funds” MMFs as well as an aggregated SBS for the ODC subsector as defined above, but excluding “Type B Liquid Funds” MMFs. In addition, the CBRT compiles and disseminates a number of detailed tables of major balance sheet items with breakdown by instrument and by sector. Each individual table published by the CBRT does not cover all the details as presented in the *MFSM*-based SBS. However, all the published tables combined provide most details albeit some different terminologies are used. In addition, the users can easily derive the surveys for the CBRT as well as for the ODC subsector from either the published monetary survey or monetary sector analytical accounts as in these two tables data are disaggregated into the monetary authorities, DMBs, IDBs, and PBs.

The CBRT has implemented the Standardized Report Forms (SRFs) for MFS, which have been submitted to STA on a monthly basis since November 2005. The SRFs have been compiled from the existing source data; no additional source data or report forms were necessary. As a result, Turkey has been included in *International Financial Statistics Supplement* from March 2007. The SRFs contain sectoral and financial instrument breakdown fully consistent with the *MFSM*. The CBRT is working to derive the sectoral balance sheets and surveys for the central bank, the ODC subsector and each subgroup of the

deposits previously included in the old definition of broad money are excluded from the new definition, (v) deposits of general government subsectors other than central government are classified under M1 or M2 based on their types.

²³ The term “DMBs” used by the CBRT covers only commercial banks; investment and development banks and participation banks are not included.

²⁴ The term “sectoral accounts” is used instead of sectoral balance sheet in the CBRT’s published data.

ODCs, as well as the DC survey from the SRF-based data. However, the SRF-based monetary statistics are not disseminated in the CBRT's publications. The CBRT plans to improve the sectoral and financial instrument breakdown in the data disseminated in its publication with a view to presenting the published data in formats closer to the ones in the *MFSM*.

2.2 *Scope*

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

According to the Banking Law of November 1, 2005 No.5411, DMBs, IDBs, and PBs meet the definition of “bank” as prescribed in the Law. DMBs are financial institutions operating primarily for the purpose of accepting deposits and providing loans on their own accounts. PBs are financial institutions operating primarily for the purpose of raising funds through “special current accounts”²⁵ and “participation accounts”²⁶ as well as providing loans. IDBs are financial institutions operating primarily for the purpose of providing loans and/or to fulfill the duties assigned thereto by their special laws. IDBs can raise funds by issuing debt securities as well as conducting Repo transactions.²⁷ They are not allowed to accept deposits or participation funds. MMFs issuing “Type B Liquid Funds” are entities that acquire money market instruments with a residual maturity of less than 90 days and which can be liquidated at any time without fees. Branches of foreign banks operating in Turkey are also defined as banks.

In the *MFSM*, the ODCs subsector consists of all resident financial corporations (except the central bank) and quasi-corporations mainly engaged in financial intermediation. Their liabilities consist of deposits or financial instruments that are included in the national 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, DMBs, PBs, IDBs, and “Type B Liquid Funds” MMFs issue liabilities—demand deposits, time deposits, “Type B Liquid Funds”, and funds received from Repo transactions—that are included in the national definition of broad money (M3). Hence, DMBs, PBs, IDBs, and “Type B Liquid Funds” MMFs comprise the ODC subsector as defined in the *MFSM*. No other financial institutions operating in Turkey issue liabilities included in the measure of M3.

The DCs sector comprises the CBRT, 50 banks—33 DMBs, 13 IDBs, and 4 PBs—and 51 “Type B Liquid Funds” MMFs. Of the 50 banks, 22 are resident branches or subsidiaries of

²⁵ Special current accounts have the same features as transferable deposits defined in the *MFSM*.

²⁶ “Participation accounts” have the same features as time deposits defined in the *MFSM*.

²⁷ IDBs are defined as banks by the Banking Law No. 5411 of September 2008 and are authorized to conduct Repo transactions. As of November 2008, 8 of 13 IDBs have conducted Repo with maturity ranging from overnight to one week.

foreign banks. The monetary survey disseminated by the CBRT is the consolidation of the SBS of the monetary authorities and the ODCs. As mentioned earlier, the SBS of the monetary authorities is similar to the SBS for the CBRT; hence the monetary survey is similar in scope to the DC survey as defined in the *MFSM*. Data for the ODCs and the CBRT, covering their headquarters and all domestic branches are included in the monetary statistics. A bank currently in liquidation continues to be included in monetary statistics. As a result, the scope of the monetary statistics compiled by the CBRT is complete and consistent with the guidelines set out in the *MFSM*. This complete coverage is also used in compiling the SRFs.

2.3 *Classification/sectorization*

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

The residency criterion is used to distinguish between residents and nonresidents in line with the *BPM5*, and is consistent with the concept of residence recommended in the *MFSM*. The distinction between residents and nonresidents is necessary to identify foreign and domestic positions. The reporting entities are aware of this concept and apply it properly in compiling and reporting data for the monetary statistics purposes. Consistent with the *MFSM*, branches of foreign banks in Turkey are regarded as residents, whereas branches of domestic banks abroad are classified as nonresidents.

The sectorization used in the source data for the ODCs—Forms ST400A and VK100A—is based on the “Institutional Sector List” (ISL) prepared by the CBRT. Also, Form MZ600A issued by the BRSA and the source data for the CBRT have breakdowns in line with the ISL. The ISL was updated in March 2007 in consultation with Turkstat, MOF, and Treasury. The updated ISL is broadly in line with the classification in the *1995 ESA* and the *MFSM*. It was transmitted to the reporting ODCs as a guidance. According to the ISL, the resident institutional units are classified into (i) general government disaggregated into central government; local governments, and social security institutions; (ii) central bank; (iii) DMBs; (iv) IDBs; (v) PBs, (vi) nonbank financial institutions disaggregated into insurance companies and pension funds, other financial intermediaries, and financial auxiliaries; (vii) nonfinancial public enterprises; and (viii) private sector disaggregated into nonfinancial companies, individual corporations,²⁸ households, and non-profit institutions serving households. However, for deriving the ODC subsector from the ISL, there is a need to identify “Type B Liquid Funds” MMFs, which are classified together with other mutual funds under other financial intermediaries.

Although “private sector” in the source data is broken down into “private nonfinancial corporations” and “households” as recommended in the *MFSM*, such breakdown is not provided in the monetary survey and the sectoral accounts (similar to SBS) of DMBs, IDBs, and PBs published by the CBRT. As mentioned earlier, however, the CBRT also

²⁸ Individual corporations are quasi corporations as defined in the *MFSM*.

disseminates a number of detailed tables of major balance sheet items with breakdown by financial instrument and by sector, including the private sector breakdown.

To facilitate the CBRT's Accounting Department as well as the ODCs to report transactions with public nonfinancial corporations (PNFCs), a list of PNFCs was prepared by the MFDD and included in the ISL, which was circulated to the reporting entities as a guidance. The MFDD acknowledged that the coverage of central government is not fully consistent with the definition used by the MOF. For example, the MFDD classifies the revolving fund administrations (RFAs)²⁹ as PNFCs, while the MOF includes them in the central government. A working group of the relevant data producing agencies—CBRT, Treasury, MOF, SPO, and Turkstat—developed a common list of general government disaggregated into central government, local governments, and social security institutions. The list was published in February 2009 as a Communiqué and will be used by all data producing agencies, thus ensuring a consistent use of the definition of general government for statistical purposes. The list of PNFCs is maintained by the Treasury and any changes made by the Treasury will be reflected in the CBRT's ISL to ensure consistency.

In the *MFSM*, financial assets are classified into (i) monetary gold and SDRs (for central bank only), (ii) currency, (iii) deposits disaggregated into transferable and other deposits, (iv) securities other than shares, (v) loans, (vi) shares and other equity, (vii) insurance technical reserves, (viii) financial derivatives, (ix) other accounts receivable/payable. There are some differences between the classification of financial assets used in the source data for compiling monetary statistics and the classification in the *1995 ESA* and the *MFSM*. In the source data used by the CBRT, assets and liabilities are classified into (i) currency, (ii) deposits, (iii) credit, (iv) securities disaggregated into (a) bonds and bills, (b) share, and (c) "Type B Liquid Funds" issued by MMFs.

Inconsistent with the *MFSM*, financial derivatives are not separately identified. Banks report financial derivatives under "unclassified assets" or "unclassified liabilities", hence they are included in other items (net) in the monetary survey. Also, banks' positions vis-à-vis "Type B Liquid Funds" MMFs are not separately available as the current report forms do not have separate lines for these MMFs. As a result, the positions with "Type B Liquid Funds" MMFs and other mutual funds are reported under the same subsector (other financial intermediaries). The term "credit" instead of "loan" is used. Shares and "Type B Liquid Funds" issued by MMFs are separately reported, but classified under securities. Consistent with the *MFSM*, however, shares are reclassified as "share and other equities" in the SRFs and "Type B Liquid Funds" are classified as part of broad money in the monetary statistics.

In the data published by the CBRT, more limited instrument breakdown is used. For example, only "credit", "bonds and bills, and "participations" are separately identified in the

²⁹ Revolving fund administrations are administrations established under state-owned hospitals, universities etc, that charge their services at market prices, but are financially supported by the central government and use the central government's facilities and civil servants to deliver services. It is not clear the extent to which unpaid use of these facilities and services contributes to the profitability of these entities.

sectoral accounts of the DMBs, PBs, and IDBs. Furthermore, some major aggregates, such as foreign assets, foreign liabilities, domestic interbank claims and liabilities, claims on other financial institutions and nonbank financial institutions are not disaggregated by financial instrument. This instrument breakdown of some of these aggregates is available in the detailed tables of balance sheet items that are also published by the CBRT.

Securities repurchase operations conducted by the CBRT are recorded as outright sales of securities in the CBRT balance sheet. For statistical purposes, however, the MFDD treats securities repurchase operations as collateralized loans and makes adjustments accordingly. Hence, this treatment of securities repurchase operations is consistent with the *MFSM* recommendations. Also consistent with the *MFSM*, Repo transactions are treated as collateralized loans.

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. All stocks and flows denominated in foreign currency should be converted to national currency values at the midpoint between the buying and selling rates of exchange.

The CBRT prepares its statutory financial statements in accordance with the Turkish Commercial Code and Tax Legislation as well as the CBRT Law. Based on these Legislation and Law, acquisition costs are used for the initial recognition of assets and liabilities. For the subsequent valuation, securities other than shares and assets in the form of shares and other equities are recorded at fair value. Loans and deposits are valued at nominal value. Foreign-currency denominated accounts are converted into local currency amounts using the CBRT's end-period buying exchange rate. The CBRT's exchange rates are determined based on the average of rates as quoted by banks in the interbank foreign exchange market, hence the CBRT's exchange rates are market-based rates. However, gold holdings (monetary and nonmonetary) are revalued quarterly (instead of monthly) using the averaged international gold prices.

The International Financial Reporting System (IFRS) rules have been used by the ODCs to value financial assets and financial liabilities since November 2006. The valuation under the IFRS rules is in general consistent with the *MFSM* with a few exceptions. For example, securities other than shares in the category of held-to-maturity investments as well as equity shares in the category of available-for-sale financial assets can be valued at amortized cost.

In Turkey, however, these two types of assets are also valued at fair value in line with the *MFSM*. Foreign-currency denominated accounts are converted into local currency amounts using the market buying exchange rate.

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 CBRT's balance sheet. For compiling monetary statistics, however, gross data on loans are used in line with *MFSM*. Inconsistent with the *MFSM*, the value of loans and deposits in monetary statistics comprise only the outstanding principal amount; accrued interest is not included. However, accrued interest is included the value of loans and deposits in the SRFs.³⁰

As regards the CBRT, unrealized gains and losses arising from the currency revaluation of assets and liabilities denominated in foreign currency as well as differences arising from price and currency revaluation of gold are recorded as unrealized gains and losses in the "Revaluation Account" as per Article 61 of the CBRT Law in line with the *MFSM* recommendations. When gains and losses become realized, they are transferred to the income statement. For the ODCs, the IFRS rules on recording unrealized gains and losses are followed.

The *MFSM* recommends that data be compiled on stocks and on each of the three flows components: *transactions*, *revaluations*, and *other changes in the volume of assets*. In Turkey, banks do not provide financial information on flows, but the MFDD derives flow data from stock data on the CBRT and the ODCs for *1995 ESA* Financial Accounts purposes.

2.4.2 *Recording is done on an accrual basis*

In accordance with the accrual accounting principles recommended in the *MFSM*, source data for compiling monetary statistics are recorded on accrual basis. The accounting standards in Turkey require that interest be accrued on a monthly basis. However, accrued interest due but not yet paid on financial instruments are not incorporated into the outstanding amount of the financial asset or liability. The accrued interest on both assets and liabilities, except financial instruments which are shown at their fair value, are recorded into separate accrual accounts under "other assets" and "other liabilities," respectively. For compiling the SRFs, accrued interest is incorporated in the outstanding value of the underlying instruments in line with the *MFSM*.

In general, transactions are recorded at the time the transaction occurs in line with the *MFSM*. Transactions are recorded by means of simultaneous electronic recording.

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

³⁰ Based on the ECB Regulation (EC) No. 2423/2001 of November 22, 2001, concerning the consolidated balance sheet of MFI sector, accrued interest is not required to be included in the outstanding value of the underlying instruments.

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 survey) are also shown with the underlying gross data.

For the compilation of the sectoral balance sheets of the CBRT and the ODCs, 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 survey is obtained by canceling out all outstanding claims and liabilities between the CBRT and ODCs and between the ODCs. Interbank claims and liabilities are netted in the monetary survey.

3. Accuracy and reliability

3.1 Source data

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

The source data for compiling the sectoral accounts for the CBRT are the accounting records of the CBRT prepared by the Accounting Department on a monthly basis. They consist of a balance sheet and several annex detailed tables, which are linked to the balance sheet to ensure internal consistency. The balance sheet and the detailed tables are generated from an electronic general ledger system by the Accounting Department and made available in required frequency to the MFDD. Source transactions are fully captured and the reports are generated from a predetermined classification of each account.

The ODC data included in the monetary survey are based on the monthly trial balance form (Form MZ600A) and several detailed forms, all of which are part of the “Supervisory Reporting Package” provided by the DMBs, IDBs, and PBs. Items in this Reporting Package are derived from accounting records of the reporting entities. The incoming data are continuously reviewed by the MFDD to ensure accuracy and full institutional coverage. The reporting forms capture in principle the full range of financial instruments and economic sectors. They provide almost all details that are necessary for the classification of financial instruments and economic sectors, as defined in the *MFSM*. Data source for “Type B Liquid Funds” MMFs is the website of the Capital Market Board (www.spk.gov.tr), which regulates MMFs. The institutional and geographic coverage of the ODC data is complete. For implementing the SRFs, no additional source data or report forms were necessary.

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 the ODCs via “Supervisory Reporting Package”—the trial balance form “MZ600A”, forms ST400A and VK100A. Form ST400A is designed to obtain detailed sector breakdown of financial instruments (e.g., securities), whereas form VK100A provides maturity, sector, currency, and geographic breakdown for loans extended by banks. 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 “private nonfinancial corporations” and “households” are only available for deposits with, and loans granted by, banks. The data on holders of MMFs are not yet collected, hence the counterpart sector is assumed to be households only. The Central Registry Agency is conducting a test study to provide sectoral breakdown for the liabilities of “Type B Liquid Funds” MMFs.

The source data for the CBRT are in general sufficient. However, transactions of the CBRT as well as banks with counterparties that cannot be reasonably approximated or allocated to specific instruments or sectors are recorded in “other assets” and “other liabilities” until further details are obtained.

The statistical compilers of the MFDD 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

Source data for the CBRT are timely—the accounting records of the CBRT are available on a daily, weekly, and monthly basis to the MFDD. The banks’ report forms are submitted on a weekly and monthly basis to the MFDD. The weekly report forms provide data on main balance sheet items, such as credits, deposits, securities, and details of consumer loans, with limited sector and instrument disaggregation. These weekly report forms are intended only for monetary statistics. They are submitted via e-mail to the MFDD.

The banks’ monthly report forms in “Banks’ Supervisory Reporting Package under UCA,” including Forms MZ600A, ST400A and VK100A used for monetary statistics are required to be submitted to the MFDD (as well as the BRSA) electronically via the EDTS within 23 business days. The long lag has been agreed because of a heavy reporting burden. Banks have to complete all 37 monthly report forms in the “Supervisory Reporting Package” before they can submit them to the BRSA and the CBRT—three report forms in the reporting package used for monetary statistics cannot be reported separately. Banks are required within the agreed reporting period to crosscheck all data reported in 37 reporting forms. There is an ongoing project, which is being implemented jointly by the BRSA and CBRT to streamline the report forms and improve the timeliness. For this reason, the ODC data cannot be compiled and available within one month after the end of the reference month in line with the SDDS guidelines. As a result, a flexibility option is utilized for the two-month timeliness of

the data for the depository corporations, which include the ODC data (except December, January, and February). Due to year-end delays, data for December and January are disseminated no later than 4 months, and for February data no later than 3 months.

Source data for “Type B Liquid Funds” MMFs are obtained from the Capital Market Board’s website on a monthly basis. Based on the consolidated portfolio values of MMFs, the sectoral accounts for “Type B Liquid Funds” MMFs are created. For this purpose, since information on holders of MMFs is not available, all MMFs are assumed to be held by households. On the asset side, the asset composition is obtained from the Capital Market Board and allocated to sectors accordingly.

The MFDD conduct follow ups with late respondents via telephone in order to collect information to meet publication deadlines.

3.2 Assessment of source data

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

No sample surveys are used in collecting data for compiling monetary statistics. Data are collected on a regular basis through a well-established reporting system. A computerized monitoring system has been in place to check the internal consistency of each corporation’s data and identifies out-of-trend movements. Queries regarding the balance sheet data of the CBRT are addressed in collaboration with the Accounting Department. Any problems with the ODC data are resolved with the reporting banks. All corrections and clarifications received from reporting entities are appropriately filed for future reference.

The reporting forms for the ODCs are occasionally revised to reflect changes in the presentation of accounting records, sector reclassifications, and the needs of compilers. The SD is authorized to make revisions in the reporting forms that have been primarily designed by the SD to collect statistical information for the compilation of monetary statistics (ST400A and VK100A forms). If necessary, the CBRT conducts meetings with the BRSA, which has the authority to introduce changes to the UCA. This accounting framework constitutes the basis for the banks’ reporting forms primarily designed for supervisory purposes.

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

3.3 *Statistical techniques*

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

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 fully automated. In processing source data, computerized files that incorporate macros are used to avoid processing errors.

As mentioned earlier, however, data on MMFs obtained from the Capital Market Board's website lack sectoral breakdown. For compiling monetary statistics, all MMFs' liabilities are assigned to households. Also, some transactions of the CBRT and banks that cannot be allocated to specific instruments or sectors are recorded in "other assets" and "other liabilities" until further details that allow appropriate classification are obtained.

If reporting of data by some ODCs is delayed, the compilers carry forward the data of the last month of the late reporting ODCs into the current month's statistics. Once the missing data are received, the database is updated. This is not a common occurrence. Procedures for data management are documented and assisted by the Information Technologies Department of the CBRT.

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

In general, source data are not adjusted for the compilation of monetary statistics. Data reported by banks and other financial institutions are not subject to coverage or other statistical adjustments. As mentioned earlier, exceptionally, if data for some banks are not available on time, 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. For MMFs, since sectoral breakdown of holders of MMFs is not available, all liabilities are assigned to "households".

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

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

Cross-checks are carried out against data available from other departments of the CBRT. For instance, data on government securities that are compiled by the Markets Department are used to verify data on central government; statistics on international reserves compiled by the Markets and Accounting Departments are used for cross-checking data on the CBRT's foreign assets. Data on reserve requirements calculated by the Banking and Financial Institutions Department are also used for cross-checking the weekly data.

Data obtained from banks are verified and internal consistency is checked through cross-control programs developed by the Information Technology Department. The programs will generate error messages if inconsistencies and/or mistakes are found. Also, plausibility checks are made and investigated with the reporting banks. If deemed necessary, the accuracy of the balance sheets submitted by banks is checked against secondary data sources such as the BRSA and the Banking Association of Turkey. In general, however, most queries concerning monetary statistics are resolved by the MFDD by contacting banks through telephone or e-mail.

The CBRT balance sheet data is verified jointly by the Accounting Department and the SD before publication.

3.4.2 Statistical discrepancies in intermediate data are assessed and investigated

The MFDD investigates statistical discrepancies and determines major factors that might be contributing to them. It compares the CBRT's data with the reported data for the ODCs to ensure that the interbank positions are in general consistent. The interbank positions show discrepancies, which can be explained by the different time of recording of the transactions and misclassification of "Type B Liquid Funds" MMFs by banks as other financial corporations due to lack of information.

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 MFDD is likely to receive inquiries from data users and handle them directly. In the case of large and unexplained fluctuations in data series, the MFDD 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 internally to inform statistical processes (see also 4.3.3)

Bank reporting forms are occasionally revised to reflect changes in the presentation of accounting records, sector reclassifications, and the needs of compilers. When studies and analyses of revisions in source data, methodology, and compilation techniques are done, they are documented and announced at the CBRT's website. Investigation results and adjustments made in a revision process are taken into account in compiling data for the subsequent periods. Based on the results of the analysis, the MFDD may inform the reporting banks of the mistakes that they make and explain them how to avoid the mistakes in the subsequent data submission.

4. Serviceability

4.1 *Periodicity and timeliness*

4.1.1 Periodicity follows dissemination standards

The analytical accounts of the monetary authorities are disseminated on a weekly basis and monthly basis, and those of the banking sector on a monthly basis, in line with SDDS requirements. The monetary survey, which is similar to the depository corporations survey is monthly.

4.1.2 Timeliness follows dissemination standards

The weekly and monthly analytical accounts of the CBRT are disseminated within one week and one month, respectively, following the end of the reference period, which is in line with the specifications of the SDDS. However, Turkey has taken a flexibility option on the timeliness of the analytical accounts of the banking sector due to a delay in producing data on the ODCs. Turkey has an extensive branch banking system (8672 domestic bank branches, as of June 2008), which makes it very difficult to meet the timeliness requirement. Another reason that causes the delay is that, as mentioned in Section 3.1.3, banks have to complete all 37 monthly report forms in the “Supervisory Reporting Package” before they can submit them to the BRSA and the CBRT.

Under the flexibility option, the analytical accounts of the banking sector are disseminated within two months (except December, January, and February) after the end of the reference period. Because of year-end delays, data for December and January are disseminated no later than 4 months, and data for February no later than 3 months after the end of the reference period.

4.2 *Consistency*

4.2.1 Statistics are consistent within the dataset

The CBRT’ and ODCs’ records for claims on, and liabilities to, each other show discrepancies, because of differences in the time of recording financial transactions and the possible misclassification of “Type B Liquid Funds” MMFs by banks as other financial corporations. For example, the total of required reserves reported in the sectoral accounts of the DMBs, IDBs and PBs was considerably larger than that reported in the sectoral accounts of the monetary authorities—by almost TRY 2 billion (12.7 percent) for June 2008. The SRFs and the monetary statistics published by the CBRT show discrepancies, which are mainly due to the different treatment of accrued interest—the value of the underlying instruments in the SRFs, where applicable, includes accrued interest, whereas in the monetary statistics published by the CBRT the value of the underlying instruments does not include accrued interest.

The presentation of the components under “Claims on Banks” in the sectoral accounts of the monetary authorities and under “Liabilities to Central Bank” in the sectoral accounts of the commercial banks does not permit reconciliation as their components have different descriptions. Also, the deposit liabilities in the sectoral accounts of the commercial banks and in the table “DMB Deposits by Type” are not reconcilable.

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

The monetary statistics database is maintained by the SD. Consistent time series are available from the EDDS of the CBRT website as far back as January 1986. When changes in source data, methodology or 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. Discontinued series are presented in the “Archives” section of the EDDS.

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

The MFDD often checks the consistency of the monetary statistics with balance of payments statistics (international investment position and international reserves). In general, data on official international reserves are consistent with data on monetary gold and convertible foreign assets reported in the sectoral accounts of the monetary authorities. However, there are some inconsistencies between published fiscal data and monetary data on government accounts with the banking system. Consistency checks with GFS are rarely done.

“The Working Group on 1995 *ESA* Financial Accounts” established in 2008 by the SD in coordination with the MOF, Treasury, and Turkstat experts is analyzing the methodology for reporting data on general government as well as classifications of the government accounts used in government finance and monetary statistics with a view to improving data consistency.

4.3 Revision policy and practice

4.3.1 Revisions follow a regular and transparent schedule

Weekly data for banks are provisional, whereas monthly data are final subject to revision. Banks may send revisions in their subsequent return in case errors are made. However, such revisions are rare. If revisions to the weekly data are large, the published weekly data will be replaced with the revised data. Otherwise, no revisions will be made to the published weekly data. The weekly provisional data are disseminated on the website of the CBRT with appropriate footnotes to inform the users and this dissemination is based on a predetermined schedule. Revisions due to major changes in statistical methodology are explained in the related publication. Monthly data on the CBRT are final.

4.3.2 Preliminary and/or revised data are clearly identified

Users are alerted that the weekly published data for banks are provisional and marked with asterisk (*). The monthly data are final, but subject to revision. The revised data are disseminated in the same way, and at the same level of detail, as the data first published. As mentioned earlier, however, the revisions to the monthly data are rare.

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

In case of major revisions, the MFDD undertakes studies to measure the magnitude of the revisions and to analyze the source of revisions. Some of this information is provided in footnotes under the statistical tables and under “What’s New” in the EDDS of the CBRT’s website. The MFDD has made public comprehensive studies and analyses of revisions beginning in mid–December 2008 under the Publications section of the website for “Money and Banking Statistics.”

5. Accessibility

5.1 Data accessibility

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

The presentation of monetary statistics by the CBRT facilitates the interpretation of the data by the users. On the CBRT’s website, monthly data for the monetary survey with breakdown by subsectoral or subgroup components—the CBRT, commercial banks, PBs, and IDBs—as well as the detailed tables of major balance sheet items are presented in a time series format beginning January 1986 (except data for the PBs that are available beginning December 2005). In the *Quarterly Bulletin*, which is also available from the website, the same data series are available on a monthly basis, and on an annual basis beginning in 2002. Also, *Money and Banking Statistics* are available at the website on a monthly basis in the same format as in the *Quarterly Bulletin*.

As mentioned in Section 2.1.1, each individual table published by the CBRT does not cover all the details as presented in the *MFSD*-based SBS. However, all the published tables combined provide most details albeit some different terminologies are used. In addition, the users can easily derive the surveys for the CBRT as well as for the ODC subsector from either the published monetary survey or monetary sector analytical accounts as in these two tables data are disaggregated into the monetary authorities, DMBs, IDBs, and PBs. Notes accompany the tables, where applicable, to explain changes to the methodology.

However, the breakdown and presentation of some balance sheet aggregates do not allow easy comparison of related data in different tables. For example, “Claims on Banks” in the monetary authorities’ sectoral accounts are broken down into (i) advances and discounts, (ii) credit to nonfinancial public enterprises, and (iii) other claims, while “Liabilities to Central Bank” in the DMBs’ sectoral accounts are broken down into (i) interbank deposits, (ii) credits, and (iii) miscellaneous payables, (iv) transitory liability accounts, (v) securities payable (repurchase agreements).

5.1.2 Dissemination media and format are adequate

The media and formats used in the dissemination of data are adequate. Monetary statistics are disseminated in hardcopy publication as well as on the website of the CBRT to meet the needs of data users. *Weekly Press Bulletin* is available as a bilingual publication (Turkish and English) to all media, all banks, public institutions, and international subscribers at the website every Thursday afternoon. Hard copies in limited quantity are sent free of charge to some public institutions and media. Requests for subscriptions are addressed to Türkiye Cumhuriyet Merkez Bankası, İletişim ve Dış İlişkiler Genel Müdürlüğü, Kamuoyu ile İlişkiler Müdürlüğü, İstiklal Cad. No:10 06100 Ulus, Ankara, Turkey.

The disseminated data and the websites where these data can be downloaded are as follows:

- Weekly data for monetary aggregates and total domestic credit and at the EDDS are released simultaneously to all interested parties by issuing the *Weekly Press Bulletin* at <http://www.tcmb.gov.tr/basin/bbultmainyeni.html>.
- Daily analytical accounts of the CBRT are disseminated at CBRT website and weekly data are released in the "Weekly Press Bulletin".
- The time series of weekly data are simultaneously disseminated at the CBRT website in the EDDS <http://evds.tcmb.gov.tr/yeni/cbt-uk.html>.
- The monthly data covering all the prescribed components are published in the EDDS under Periodic Publications at <http://www.tcmb.gov.tr/yeni/evds/yayin/parabank/parabankanamenuing.html> and *Quarterly Bulletin* at <http://www.tcmb.gov.tr/ucaylik/ucayanamenuing.html>

5.1.3 Statistics are released on a preannounce schedule

Monetary statistics are released according to an advance release calendar, which gives a year-ahead notice of the release dates. This calendar is posted on the CBRT's website <http://www.tcmb.gov.tr/yeni/veriyay/takvimeng.html>, which is also disseminated on Turkstat's webpage in the context of the Official Statistical Program. It is also available on the IMF's Dissemination Standards Bulletin Board (DSBB). A notice to this effect is published in the CBRT's *Quarterly Bulletin*.

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

Data are disseminated simultaneously to all interested parties, first on the CBRT's website, then in the CBRT's publications. The CBRT's website contains information about "Electronic Data Dissemination System (EDDS)," which is a dynamic and interactive data dissemination system that provides the public with access via internet to the statistics compiled and published by the CBRT. The website provides a clear guidance on how to use the EDDS. The use of this system, where the data are presented both in Turkish and English, does not require any additional hardware or software.

5.1.5 Statistics not routinely disseminated are made available upon request

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

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 summary methodology for the analytical accounts of the banking sector and the central bank, including the concepts, classifications, data sources, characteristics, and definitions are available in the SDDS framework posted on the IMF's DSBB. These metadata pages are scrutinized and updated on a regular basis. Most statistical tables published by the CBRT contain footnotes that explain changes to the data series. Brief explanations of major changes to the methodology are disseminated in the EDDS under the "What's New" section of the CBRT's website as well as in the footnotes of statistical tables in both the EDDS and the *Quarterly Bulletin*. Comprehensive metadata that describe concepts, scope, classifications, basis of recording, data sources, and statistical techniques are available from the CBRT's website starting in mid-December 2008 at

<http://www.tcmb.gov.tr/yeni/evds/yayin/parabank/methodology.pdf>

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

The summary methodology available in the SDDS framework posted on the IMF's DSBB as well as the notes accompanied the statistical tables provide various levels of detail for the intended audience. This summary methodology is also accessible through Turkstat's website. As mentioned earlier, the CBRT has disseminated comprehensive metadata to the public in its website since mid-December 2008. A link from the CBRT's website to the summary methodology in DSBB will be established.

5.3 Assistance to users

5.3.1 Contact points for each subject field are publicized

Prompt and knowledgeable service and support is provided to statistics users. Data users can reach the contact persons for the monetary statistics identified in the SDDS metadata through the IMF's DSBB. The users can also address queries on monetary data to the MFDD through e-mail (iletisimbilgi@tcmb.gov.tr), which is provided in the "Publication" section of the CBRT's website. Also, they can send queries via e-mail (evds@tcmb.gov.tr) under EDDS. In addition, the users can contact the head of the SD using the phone number and email address, which can be found in the "General Information" section of CBRT's website. Also, the contact points are disseminated in Weekly Press Bulletin, Quarterly Bulletin, and on the

CBRT's website. However, no brochures have been developed to educate users. Users surveys are produced occasionally.

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

A catalogue of the CBRT's publications is not available. However, lists of the data published by the CBRT and the CBRT's publications, as well as a data release calendar are posted on the CBRT's website. In addition, the CBRT has a subscription form, which can be completed and submitted electronically through the CBRT's EDDS. Publications, documents, and other services are free of charge.

RECOMMENDATIONS

High priority

- Bring the timeliness of the monetary survey and the analytical accounts of the banking sector in line with the SDDS prescription. To this end, move expeditiously, in collaboration with the BRSA, to streamline the reporting system without loss of necessary detail.
- Identify and report separately financial derivatives in the "sectoral accounts."
- Address discrepancies in interbank data.

Other

- Identify separately the MMFs that issue "Type B Liquid Funds" in the "Institutional Sector List" to facilitate appropriate classification by reporters.
- Adhere more closely to the terminology in the *MFSM*, particularly to describe financial instruments, and explain in footnotes any deviations, when warranted.

Table 6. Turkey: Data Quality Assessment Framework (July 2003): Summary of Results for Monetary Statistics
(Compiling Agency: Central Bank of the Republic of Turkey)

Key to symbols: NA = Not Applicable; O = Practice Observed; LO = Practice Largely Observed; LNO = Practice Largely Not Observed; NO = Practice Not Observed; SDDS = Complies with SDDS Criteria						
Element	NA	Assessment				Comments
		O	LO	LNO	NO	
0. Prerequisites of quality						
0.1 Legal and institutional environment		X				
0.2 Resources		X				
0.3 Relevance		X				
0.4 Other quality management		X				
1. Assurances of integrity						
1.1 Professionalism		X				
1.2 Transparency		X				
1.3 Ethical standards		X				
2. Methodological soundness						
2.1 Concepts and definitions		X				
2.2 Scope		X				
2.3 Classification/sectorization			X			Financial derivatives and positions vis-à-vis money market funds (MMFs) issuing "Type B Liquid Fund" are not separately identified; all holders of funds issued by MMFs are classified as households as no sectoral breakdown is available.
2.4 Basis for recording		X				
3. Accuracy and reliability						
3.1 Source data		X				
3.2 Assessment of source data		X				
3.3 Statistical techniques		X				
3.4 Assessment and validation of intermediate data and statistical outputs		X				
3.5 Revision studies		X				

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Element	NA	Assessment				Comments
		O	LO	LNO	NO	
4. Serviceability						
4.1 Periodicity and timeliness			X			The CBRT has taken a flexibility option on the timeliness of the banking sector data. The depository corporations data are disseminated two months or more after the end of the reference month. Data on transactions between the CBRT and the other depository corporations are not consistent. There are some inconsistencies between published fiscal data and monetary data on government accounts with the banking system. Consistency checks with government finance statistics are rarely done.
4.2 Consistency			X			
4.3 Revision policy and practice		X				
5. Accessibility						
5.1 Data accessibility		X				
5.2 Metadata accessibility		X				
5.3 Assistance to users		X				

Appendix I. Summary of the Special Data Dissemination Standard (SDDS)

The SDDS prescribes the following practices under each of the identified dimensions:

Data dimension (coverage, periodicity, and timeliness)

- the dissemination of 18 data categories, including component detail, covering the four main sectors (real, fiscal, financial, and external) of the economy, with prescribed periodicity and timeliness.

Access dimension

- the dissemination of advance release calendars providing at least a one-quarter advance notice of approximate release dates, and at least a one-week advance notice of the precise release dates; and
- the simultaneous release of data to all users.

Integrity dimension

- the dissemination of the terms and conditions under which official statistics are produced and disseminated;
- the identification of internal government access to data before release;
- the identification of ministerial commentary on the occasion of statistical release; and
- the provision of information about revision and advance notice of major changes in methodology.

Quality dimension

- the dissemination of documentation on statistical methodology and sources used in preparing statistics; and
- the dissemination of component detail and/or additional data series that make possible cross-checks and checks of reasonableness.

SDDS subscribers are required to:

- post descriptions of their data dissemination practices (metadata) on the IMF's Dissemination Standards Bulletin Board (DSBB). Summary methodologies, which describe data compilation practices in some detail, are also disseminated on the DSBB; and

- maintain an Internet website, referred to as the National Summary Data Page (NSDP), which contains the actual data described in the metadata and to which the DSBB is electronically linked.

The IMF staff is monitoring observance of the standard through NSDPs maintained on the Internet. Monitoring is limited to the coverage, periodicity, and timeliness of the data and to the dissemination of advance release calendars.

Source: <http://dsbb.imf.org>.

**Appendix II. Data Quality Assessment Framework—Generic Framework
(July 2003 Framework)**

Quality Dimensions	Elements	Indicators
<p>0. Prerequisites of quality</p>	<p>0.1 Legal and institutional environment—<i>The environment is supportive of statistics.</i></p> <p>0.2 Resources—<i>Resources are commensurate with needs of statistical programs.</i></p> <p>0.3 Relevance—<i>Statistics cover relevant information on the subject field.</i></p> <p>0.4 Other quality management—<i>Quality is a cornerstone of statistical work.</i></p>	<p>0.1.1 The responsibility for collecting, processing, and disseminating the statistics is clearly specified.</p> <p>0.1.2 Data sharing and coordination among data-producing agencies are adequate.</p> <p>0.1.3 Individual reporters' data are to be kept confidential and used for statistical purposes only.</p> <p>0.1.4 Statistical reporting is ensured through legal mandate and/or measures to encourage response.</p> <p>0.2.1 Staff, facilities, computing resources, and financing are commensurate with statistical programs.</p> <p>0.2.2 Measures to ensure efficient use of resources are implemented.</p> <p>0.3.1 The relevance and practical utility of existing statistics in meeting users' needs are monitored.</p> <p>0.4.1 Processes are in place to focus on quality.</p> <p>0.4.2 Processes are in place to monitor the quality of the statistical program.</p> <p>0.4.3 Processes are in place to deal with quality considerations in planning the statistical program.</p>
<p>1. Assurances of integrity <i>The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.</i></p>	<p>1.1 Professionalism—<i>Statistical policies and practices are guided by professional principles.</i></p> <p>1.2 Transparency—<i>Statistical policies and practices are transparent.</i></p> <p>1.3 Ethical standards—<i>Policies and practices are guided by ethical standards.</i></p>	<p>1.1.1 Statistics are produced on an impartial basis.</p> <p>1.1.2 Choices of sources and statistical techniques, as well as decisions about dissemination, are informed solely by statistical considerations.</p> <p>1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics.</p> <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.</p> <p>1.2.2 Internal governmental access to statistics prior to their release is publicly identified.</p> <p>1.2.3 Products of statistical agencies/units are clearly identified as such.</p> <p>1.2.4 Advance notice is given of major changes in methodology, source data, and statistical techniques.</p> <p>1.3.1 Guidelines for staff behavior are in place and are well known to the staff.</p>

Quality Dimensions	Elements	Indicators
<p>2. Methodological soundness <i>The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.</i></p>	<p>2.1 Concepts and definitions—<i>Concepts and definitions used are in accord with internationally accepted statistical frameworks.</i></p> <p>2.2 Scope—<i>The scope is in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.3 Classification/sectorization—<i>Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.</i></p> <p>2.4 Basis for recording—<i>Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices</i></p>	<p>2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.</p> <p>2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.</p> <p>2.4.1 Market prices are used to value flows and stocks.</p> <p>2.4.2 Recording is done on an accrual basis.</p> <p>2.4.3 Grossing/netting procedures are broadly consistent with internationally accepted standards, guidelines, or good practices.</p>
<p>3. Accuracy and reliability <i>Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.</i></p>	<p>3.1 Source data—<i>Source data available provide an adequate basis to compile statistics.</i></p> <p>3.2 Assessment of source data—<i>Source data are regularly assessed.</i></p> <p>3.3 Statistical techniques—<i>Statistical techniques employed conform to sound statistical procedures.</i></p> <p>3.4 Assessment and validation of intermediate data and statistical outputs—<i>Intermediate results and statistical outputs are regularly assessed and validated.</i></p> <p>3.5 Revision studies—<i>Revisions, as a gauge of reliability, are tracked and mined for the information they may provide.</i></p>	<p>3.1.1 Source data are obtained from comprehensive data collection programs that take into account country-specific conditions.</p> <p>3.1.2 Source data reasonably approximate the definitions, scope, classifications, valuation, and time of recording required.</p> <p>3.1.3 Source data are timely.</p> <p>3.2.1 Source data—including censuses, sample surveys, and administrative records—are routinely assessed, e.g., for coverage, sample error, response error, and nonsampling error; the results of the assessments are monitored and made available to guide statistical processes.</p> <p>3.3.1 Data compilation employs sound statistical techniques to deal with data sources.</p> <p>3.3.2 Other statistical procedures (e.g., data adjustments and transformations, and statistical analysis) employ sound statistical techniques.</p> <p>3.4.1 Intermediate results are validated against other information, where applicable.</p> <p>3.4.2 Statistical discrepancies in intermediate data are assessed and investigated.</p> <p>3.4.3 Statistical discrepancies and other potential indicators or problems in statistical outputs are investigated.</p> <p>3.5.1 Studies and analyses of revisions are carried out routinely and used internally to inform statistical processes (see also 4.3.3).</p>

Quality Dimensions	Elements	Indicators
<p>4. Serviceability <i>Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.</i></p>	<p>4.1 Periodicity and timeliness—<i>Periodicity and timeliness follow internationally accepted dissemination standards.</i></p> <p>4.2 Consistency—<i>Statistics are consistent within the dataset, over time, and with major datasets.</i></p> <p>4.3 Revision policy and practice—<i>Data revisions follow a regular and publicized procedure.</i></p>	<p>4.1.1 Periodicity follows dissemination standards. 4.1.2 Timeliness follows dissemination standards.</p> <p>4.2.1 Statistics are consistent within the dataset. 4.2.2 Statistics are consistent or reconcilable over a reasonable period of time. 4.2.3 Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.</p> <p>4.3.1 Revisions follow a regular and transparent schedule. 4.3.2 Preliminary and/or revised data are clearly identified. 4.3.3 Studies and analyses of revisions are made public (see also 3.5.1).</p>
<p>5. Accessibility <i>Data and metadata are easily available and assistance to users is adequate.</i></p>	<p>5.1 Data accessibility—<i>Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.</i></p> <p>5.2 Metadata accessibility—<i>Up-to-date and pertinent metadata are made available.</i></p> <p>5.3 Assistance to users—<i>Prompt and knowledgeable support service is available.</i></p>	<p>5.1.1 Statistics are presented in a way that facilitates proper interpretation and meaningful comparisons (layout and clarity of text, tables, and charts). 5.1.2 Dissemination media and format are adequate. 5.1.3 Statistics are released on a preannounced schedule. 5.1.4 Statistics are made available to all users at the same time. 5.1.5 Statistics not routinely disseminated are made available upon request.</p> <p>5.2.1 Documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques is available, and differences from internationally accepted standards, guidelines, or good practices are annotated. 5.2.2 Levels of detail are adapted to the needs of the intended audience.</p> <p>5.3.1 Contact points for each subject field are publicized. 5.3.2 Catalogs of publications, documents, and other services, including information on any charges, are widely available.</p>

Appendix III. Users' Views

Summary of results of survey of data users

The mission conducted a user survey and interviewed selected users eliciting views on the macroeconomic statistics. While survey responses and interviews were few (13 survey responses and six additional interviews), results confirmed the findings of the 2001 data ROSC mission and those of the User Satisfaction Survey conducted by Turkstat in 2004.

In particular, there was overall satisfaction with the macroeconomic statistics, although users aspired to more detail, better timeliness, and more robust inter-dataset consistency. Users appeared to be more satisfied with price, monetary, and balance of payments statistics. They saw more scope for improvement in the publication of the national accounts (particularly coverage and detail) and in the GFS (data on local governments and social security funds as well as metadata). Users were interested in more frequency for the GFS and better timeliness for the national accounts, balance of payments, and government finance statistics. Interest in greater timeliness came with readiness to accommodate more revisions under a clear policy of revisions, with respondents pointing to the need for more information on such policies.

Users were aware of advance release calendars, except in the case of the GFS. All users obtained data through websites and virtually all were satisfied with data accessibility, except for a fifth of the users of the national accounts. Many respondents pointed to a need for better access to metadata and improved user support.

Interviews with users

To complement the users' views, the mission met with six key users of the macroeconomic statistics. Overall, users' views were consistent with the findings of the survey:

- Significant improvement in quality of statistics since 2001, with driving forces being the authorities' pursuit of EU accession and desire to achieve international standards.
- New GDP estimates are significantly better, but there are no long data series. Other major limitation: no regional GDP figures since 2001. Good metadata and explanation of data revisions for national accounts are now available (previously there were no metadata and changes were not explained).
- CPI data are good. Turkstat is quite open to disseminate additional data (for a reasonable fee). But information from household surveys is deemed sensitive/confidential.
- CBRT is a leading producer of macroeconomic data, especially in terms of data reliability and dissemination practices. Excellent electronic database, user friendly, very detailed, easily downloaded.
- There has been considerable progress on the GFS, but more is needed. General government data has improved significantly (and will probably be comprehensive in

2-3 years), but progress on data on state-owned enterprises is pending. BOP data are the only dataset for which there are single-source estimates.

- Lack of clear explanations of differences among similar published fiscal data.
- Since 2006 improved central government data have become available, but insufficient data on social security institutions and local administrations is a problem. The SPO remains an essential source of annual estimates of the operations of local administrations.
- Treasury data on SOEs are too aggregated and difficult to be used/analyzed.
- Improved data on government guarantees are needed.
- Needs more detail in the BOP, particularly capital flows. Certain inflows, including those related to privatization, cannot be identified.
- Explanations on GFS are somewhat superficial, and do not focus on the main changes of data released.
- Although MFS are good, there is a need to explain differences among similar aggregates published by the CBRT and the BRSA. Similarly, the differences between Treasury estimates on external debt and those prepared by the CBRT need to be explained.
- There has been an immense improvement in the volume and timeliness of official data in recent years, particularly in the case of those published by the CBRT.
- Quality of CBRT data is excellent, with the best access to users. However, further detail is needed and the timeliness of the current account balance and external debt should be improved without delay. Inter-agency collaboration is needed to speed up processing of external trade data. While the Turkish Exporters Association publishes export data with a delay of a few days, Turkstat takes 30 days.
- A few years ago, the CBRT made a great contribution with the introduction of a database on the foreign debt of the corporate sector. Now there is a need to expand detail to allow identification of debt and debt service by type of creditor (particularly parent company vs. banks). In addition, timeliness (currently lag of 5-6 months) of such data and those on corporates' foreign exchange exposure is now insufficient.
- In general, faster dissemination is needed along with a clear policy revisions and clear explanations when revisions exceed a reasonable threshold. This would permit reducing the excessive lag of three months in the publication of quarterly GDP data.
- Data published by the CBRT are of good quality, by Turkstat are satisfactory, and by the MOF need improvement in terms of coverage and transparency. Also, the metadata and explanations provided by the MOF are not enough.
- Satisfied with the timeliness, frequency and accessibility of statistics disseminated by the Treasury, including on public sector operations. However, more clarity is needed on borrowing by municipalities and development banks. To this end, more information is needed on any government guarantees issued on the debt of these entities.

Results of Turkey's User Survey—November 2008

General Information About Uses of Official Macroeconomic Statistics of Turkey	
	Total Number of Responses
1. Which official statistics do you use regularly?	
a. National accounts (NA)	13
b. Prices	13
c. Government finance statistics (GFS)	11
d. Monetary statistics (Monetary)	12
e. Balance of payments (BOP)	11
f. Other	-
• Production indices	10
• Labor market	13
• Merchandise trade	9
• International reserves and foreign currency liquidity	10
• External debt	11
• International investment position	8
• Other	-
2. What are your sources of official statistics?	
a. Turkish Statistical Institute (Turkstat)	13
b. Central Bank of the Republic of Turkey (CBRT)	12
c. Ministry of Finance (MOF)	12
d. Undersecretary of Treasury	11
e. State Planning Organization (SPO)	8
f. Other sources	7
3. Do you refer to official descriptions of the sources and methods provided by agencies compiling the macroeconomic statistics?	
• Yes	11
• No	1
4. For what purposes do you use the official statistics?	
a. Analysis of current developments for short-term decision making	11
b. Analysis of trends for longer-term policy formulation	10
c. Econometric model building and forecasting	6
d. Economic research	13
e. Comparison with economic developments in other countries	11
f. General economic background	11
g. Other	2

Results of Turkey's User Survey

General Information About Uses of Official Macroeconomic Statistics of Turkey						
	NA	Prices	GFS	Mone- tary	BOP	
5. Coverage and detail						
5.1 In general, are you satisfied with the coverage of official statistics?						
• Yes	5	12	6	12	12	
• No	6	0	2	0	0	
5.2 In general, are you satisfied with the official statistics in terms of available detail?						
• Yes	5	12	5	12	12	
• No	7	0	4	0	0	
5.3 Do you find the data collection surveys (e.g. business survey) to be adequate?						
• Yes	4	9	8	11	8	
• No	4	1	1	0	1	
5.4 Do you find statistical series to be consistent over time?						
• Yes	4	9	5	9	6	
• No	7	2	3	1	3	
5.5 Do you find the official statistics objective?						
• Yes	7	11	7	12	11	
• No	2	1	1	0	0	
6. Periodicity and timeliness						
6.1 Are you satisfied with the frequency of compilation of the official statistics (e.g., weekly, monthly, quarterly, annual)?						
• Yes	9	12	6	11	11	
• No	3	0	4	0	1	
6.2. In general, do you consider that the official statistics are disseminated with the appropriate timeliness (the time lag after the period to which they pertain, e.g., 60 days after the reference period)?						
• Yes	5	11	7	8	5	
• No	6	1	2	1	5	
7. Other dissemination practices						
7.1 Do you know if there is a publicly disseminated calendar that pre-announces the dates on which various official statistics will be disseminated?						
• Yes	11	12	7	9	10	
• No	0	0	2	0	1	
7.2 If there is a calendar of release dates, in your experience, are the official statistics released on the dates pre-announced?						
• Yes	11	13	7	8	9	
• No	0	0	1	0	0	
7.3 Is there enough information about revisions to official statistics to satisfy your						

Results of Turkey's User Survey

General Information About Uses of Official Macroeconomic Statistics of Turkey						
	NA	Prices	GFS	Mone- tary	BOP	
needs?						
• Yes	4	8	2	6	6	
• No	7	2	6	2	6	
7.4. Do you find the policy and procedure for revisions to the statistics to be adequate (scope of the revision, periodicity, announcement, etc.)?						
• Yes	1	6	1	7	5	
• No	9	3	6	3	6	
8. Accessibility						
8.1 Can you easily access the official statistics?						
• Yes	11	13	11	13	12	
• No	2	0	1	0	0	
8.2 Can you easily access information pertaining to official statistics you use (explanatory notes, methodological descriptions, reference concerning concepts, classification, statistical practice)?						
• Yes	6	10	5	11	8	
• No	5	2	5	2	4	
					Yes	No
8.3 Is the above information on methodology sufficiently clear and at an adequate level of detail to be useful to you?					9	3
8.4 In what format do you get access to official statistics?						
• Official releases						8
• Hard copy publications						8
• Data specifically requested						4
• Official website						13
• Other						7
• E-mail requests						6
	NA	Prices	GFS	Mone- tary	BOP	
9. Overall assessment						
9.1 In your opinion, is the underlying methodology of official statistics sound and appropriate?						
• Yes	8	10	6	11	9	
• No	4	2	2	0	1	
9.2 In general, do you consider the official statistics to be reliable?						
• Yes	9	11	6	11	11	
• No	1	1	1	0	0	
9.3 How would you compare the quality of official statistics of the country with those of other countries in the region?						
• Better	4	6	3	5	5	

Results of Turkey's User Survey

General Information About Uses of Official Macroeconomic Statistics of Turkey						
	NA	Prices	GFS	Monetary	BOP	
• Same	5	4	2	2	3	
• Worse	0	0	1	0	0	
9.4 How do you assess the overall quality of the official statistics? (1 rated as poor and 5 as excellent)	3.50	4.25	3.10	4.10	4.18	

NA = National Accounts; Prices refers to: CPI (Consumer Price Index) and PPI (Producer Price Index);
GFS = Government Finance Statistics; Monetary = Monetary Statistics; and BOP = Balance of Payments Statistics.

Box 1. Turkey: Comments by Users of Macroeconomic Statistics

Additional comments, including areas where you see room for improvement:

- The methodology and content of national account have been changed consistent with ESA in March this year. This improved the national account but more work is needed for complete harmonization with ESA. For example, GDP figures have not been revised according to income method. Also, details of investment are not provided and the link between industry output and value added is not properly established.
- With the March 2008 revision, Turkstat could have calculated the GDP per capita since 1998 according to the new method. Users cannot calculate the GDP per capita without knowing the population prior to 2007 (date of last census).
- Industrial production statistics by sector are not published, only percentage changes.
- Turkstat should do more work on linking series with the base year change.
- Seasonally adjusted series are needed: GDP, industrial production, trade, etc.
- Analytical breakdown of CPI is needed: services, goods, etc. CPI basket does not represent actual consumption practices. In addition, the CPI is diverging from calculations by the Istanbul Chamber of commerce. These are the reasons why we evaluate as "not reliable" the inflation statistics.
- GFS for central government budget are timely but not for the rest of public sector, especially for the local governments.
- SPO data comes a bit late.
- We have doubts about the change in IIP stocks in 2006-07. French stocks increased by almost US\$5 billion, but in terms of flow France is rated 10th at the end of 2007. An explanation is needed.
- On BOP statistics, we see a lack of precision in the real estate statistics. The CBRT is not publishing any detail about the buyers' nationalities.
- We prefer to use the Turkish statistics even if we are not sure about their reliability because Turkish statistics are more up-to-date compared to IMF, WB, or UN statistics.
- We would appreciate to have the English version of updates more quickly.
- The CBRT data retrieval system needs to be updated; too often it stops during working hours.

Source: Survey of Users of Macroeconomic Data in Turkey, November 2008.